Oil, Paint and Drug Reporter

VOL. LXV. No. 1 NEW YORK, MONDAY, JANUARY 4, 1904. FOR RATES SEE PAGE 7.

LEHN & FINK, New York

OFFER:

INSECT FLOWERS
COCOA BUTTER, 12 lb. boxes
BLEACHED IRISH MOSS
HARLEM OIL
VANILLA BEANS

Chas. Cooper & Co. 194 Worth St., New York CHEMISTS,

EXTRA REFINED WOOD ALCOHOL, ETHER SULPHURIC, SOLUBLE COTTON AND ITS SOLVENTS.

SEND FOR PRICE LIST.

BARYTES

Nulsen, Klein & Krausse Manf'g Co.,

Successors to

DINGEE WEINMAN & CO.,

General Office, Sidney Street Factory, ST. LOUIS, MO.

JAMES H. DAVIDSON, 239 Front St., New York Agent.

WM. H. OSBORNE, 162 N. 4th St, Philadelphia Agent.

Wood Products Co.

(Formerly MANHATTAN SPIRIT CO.)

BUFFALO, N. Y.,

MANUFACTURERS OF

Refined Wood Alcohol

AND SOLE MANUFACTURERS OF

Columbian Spirit.

PRICE LIST:

Extra Refined 95% - 55c. Per Gallon.
Special Refined 97% - 60c. " "
COLUMBIAN SPIRIT (A pure methyl alcohol.) 1.25 " "

AGENTS:

WILLIAM S. GRAY.....76 William St., New York City.
PIERCE & STEVENS.....Buffalo, N. Y.
H. C. COLLIER & SONS.....Binghamton, N. Y.
MERRIMAC CHEMICAL CO. 75 and 77 Broad St., Boston, Mass
MARTIN THAYER.....50 Central St., Boston, Mass.
M. L. BARRETT & CO.....219 Lake St., Chicago, Ill.
F. W. THURSTON & CO.....29 River St., Chicago, Ill.
PAUL A. DAVIS, JR.....136 N. Water St., Philadelphia, Pa.
A. L. WEBB & SONS.....Baltimore, Md.
C. B. LYON & BRO.....St. Paul, Minn.
ABNER HOOD.....Kansas City, Mo.
RICHARDSON DRUG CO.....Omaha, Neb.
W. A. HOVER & CO.....Denver, Colo.
W. P. FULLER & CO.....San Francisco, Cal.
THE HERBOTH MERCANTILE CO....St. Louis, Mo.

ALCOHOL
LINSEED OIL

ESTABLISHED 1853
A. L. Webb & Sons
Pratt and Commerce Sts.,
BALTIMORE, MD.

Cologne Spirit
TURPENTINE, ROSIN, Etc.

THURSTON & BRAIDICH, IMPORTERS, NEW YORK.

GUMS ARABIC, SENEGAL, TRAGACANTH.
VANILLA AND TONKA BEANS,
COCOA BUTTER, - - NUTGALLS.

GEO. H. LEONARD & CO., BOSTON,

IMPORTERS AND REFINERS

Cod, Menhaden, Cod Liver & Olive Oils,
WHITE FISH OIL, DEGRAS, PALMETTO, OAK,
QUEBRACHO and HEMLOCK EXTRACTS.

UNION PETROLEUM COMPANY,

REFINERS OF AND DEALERS IN

Lubricating and Illuminating Oils,
Petrolatum, Gas and Fuel Oils.

Exporters of every product of Petroleum. Facilities for shipping bulk cargoes of Illuminating and Gas Oils.

Offices, 135 S. Second Street,
PHILADELPHIA, U. S. A.

INSULATING....

COMPOUND

BLACK, BRILLIANT and ELASTIC.

Also WAXES of all kinds

W. H. BOWDLEAR & CO., 149 Pearl St., Boston, Mass.

Factories at Williamsville, Mass.

Chlorate of Potash

AMERICAN MAKE

DILLON & CO., 20 Cedar Street, New York City.

PATERSON, BOARDMAN & CO.,

Importers and General East India Merchants.

New Maritime Building, ... 8 to 10 Bridge Street, New York.

Plumbago, Kauri Gum, Manila Gum, Cocoanut Oil, Zanzibar Gum, Damar Gum, Etc.

WEBB'S ALCOHOL,

THE ACKNOWLEDGED STANDARD

JAMES A. WEBB & SON, 165 Pearl Street, NEW YORK.

The S. P. Wetherill Company

MANUFACTURERS OF

COPPERAS

IN CAR LOADS OR LESS, BARRELS OR BULK

100 William St., NEW YORK. 925 Chestnut St., PHILADELPHIA

WATERS PIERCE OIL CO.

Refiners of **PETROLEUM**

MANUFACTURERS OF CAR and AXLE GREASE

PRINCIPAL OFFICE:
816 OLIVE ST., Odd Fellows' Building,
ST. LOUIS, MO., U. S. A.

Depots in all Towns in the
SOUTHWEST and OLD MEXICO

BORNE, SCRYMSER COMPANY,

REFINERS OF

HIGH-GRADE PETROLEUM
...LUBRICANTS...

CYLINDER OILS

Engine Oils, Machinery Oils, Railroad Engine and Car Oils, Spindle Oils, Wool Oils, 300° Fire-Test Burning Oils, Neutral Oils, Lubricating Greases, Paraffine Wax.

WORKS, ELIZABETHPORT, N. J.

OFFICES:

80 and 81 South Street, New York.
3 Adelaide Place, London Bridge, London, Eng.
18 St. Ann Street, Manchester, Eng.
57 West Nile St., Glasgow, Scotland.
4 Rue Chauchat, Paris, France.
52 Dovenhof, Hamburg, Germany.

STANDARD OIL CO., Boston Dept.

SELL THE FINEST GRADE OF

Stove Naphtha for **VAPOR STOVES**

The disagreeable features connected with cooking are done away with by the use of a VAPOR STOVE.
There is no kindling to prepare, no ashes to remove and no waiting for sufficient heat.
Its full power is instantly developed and ceases at your touch.
Its first cost is in itself attractive.
Its fuel cost is less than *ONE-HALF CENT per HOUR.*

GALENA-SIGNAL OIL COMPANY

Successors to Galena Oil Company,
and Signal Oil Company

FRANKLIN, PA.

SOLE MANUFACTURERS OF THE CELEBRATED

GALENA COACH, ENGINE and CAR OILS

AND

Sibley's Perfection Valve and Signal Oils

CHARLES MILLER, President.

STANDARD OIL CO., OF NEW YORK

Cable Address, "Regent, New York."

THOMPSON & BEDFORD DEPARTMENT,

26 BROADWAY, - - - - - - NEW YORK, U. S. A.

13 St. Ann Street, Manchester, Eng.
Blumenstrasse 15, Frankfort A/M, Germany.
Puerto del Angel, Barcelona, Spain.
131 Hornby Road, Bombay, India]
Bliiter Buildings, 22 Bliiter Street, London, E. C., Eng.
25 Boulevard Haussman, Paris, France.
Collins and Williams Streets, Melbourne, Australia.
8 Dalhousie Su., East, Calcutta, India.

BEST PETROLEUM LUBRICANTS

OF GREAT BODY OR VISCOSITY AND HIGH FLASH.

PALE SPINDLE, MACHINERY AND ENGINE OILS, BAYONNE ENGINE OILS, in exclusive use by the English Admiralty.....
RAILROAD ENGINE AND CAR OILS, 300° MINERAL COLZA OIL,

CYLINDER OILS, LUBRICATING GREASES, PARAFFINE SCALE AND WAX

WORKS: FRANKLIN, PHILADELPHIA, OIL CITY, PITTSBURGH, PA.; CLEVELAND, O.; BAYONNE, CLAREMONT, N. J.; HUNTER'S POINT, BUFFALO, N. Y.; PARKERSBURG, W. VA.

Directory for Buyers.

This list is intended to assist buyers in quickly ascertaining who are headquarters for everything in the Chemical, Drug, Oil, Paint, Dyestuffs, Fertilizers, Naval Stores and allied trades, also Machinery manufacturers. The names given in this list are those of representative concerns, and it is respectfully requested, when communicating with any of them, that the fact that the name was taken from this list be mentioned. For Machinery advertisements see page 23.

ACETANILID.

C. Bischoff & Co., 88 Park Place, New York.
Merck & Co., New York.
N. Y. Quinine & Chemical Works, New York.
R. W. Phair, 16 Platt St., New York.
Roessler & Hasslacher Chemical Co., 100 William St., New York.

ACETATE OF ALUMINA.

F. Bredt & Co., 194 Fulton St., New York.
Merrimac Chem. Co., 75-77 Broad St., Boston.
The Selling Co., 186 Front St., New York.

ACETATE OF LEAD.

F. Bredt & Co., 194 Fulton St., New York.
Cochrane Chemical Co., 55 Kilby St., Boston.
Thomsen Chemical Co., Baltimore, Md.

ACETATE OF SODA.

Cochrane Chemical Co., 55 Kilby St., Boston.
General Chem. Co., 25 Broad St., New York.
Grasselli Chem. Co., Cleveland & New York.
Merrimac Chem. Co., 75-77 Broad St., Boston.
Roessler & Hasslacher Chemical Co., 100 William St., New York.
The Selling Co., 186 Front St., New York.

ACETIC ACID.

Fuerst Bros. & Co., 2 Stone St., New York.
General Chem. Co., 25 Broad St., New York.
Grasselli Chem. Co., Cleveland & New York.
Harrison Bros. & Co., Inc., Philadelphia.
Merrimac Chem. Co., 75-77 Broad St., Boston.
Roessler & Hasslacher Chemical Co., 100 William St., New York.
The Selling Co., 186 Front St., New York.
Thomsen Chemical Co., Baltimore, Md.

ALIZARINE COLORS.

Berlin Aniline Works, 213 Water St., N. Y.
Cassela Color Co., 182 Front St., New York.
A. Klipstein & Co., 122 Pearl St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., N. Y.
Arnold, Hoffman & Co., Inc., Providence.
H. A. Metz & Co., 122 Hudson St., New York.

ALKALI.

American Chemical Co., Cincinnati, O.
Brunner, Mond & Co., Ltd., Northwich, Eng.
Fuerst Bros. & Co., 2 Stone St., New York.
Hollingworth & Peterson, 653 Bourse, Phila.
Linder & Meyer, 89 State St., Boston.
The Selling Co., 186 Front St., New York.
Solvay Process Co., Syracuse & New York.
Thomsen Chemical Co., Baltimore, Md.
Wing & Evans, 22 William St., New York.
Isaac Winkler & Bro., Cincinnati, Ohio.

ALUM.

Cochrane Chemical Co., 55 Kilby St., Boston.
General Chem. Co., 25 Broad St., New York.
Harrison Bros. & Co., Inc., Philadelphia.
Kuttroff, Pickhardt & Co., 128 Duane St., N. Y.
Merrimac Chem. Co., 75-77 Broad St., Boston.
Penna. Salt Mfg. Co., 115 Chestnut St., Phila.
Powers & Weightman, Philadelphia.
The Selling Co., 186 Front St., New York.
Thomsen Chemical Co., Baltimore, Md.
John C. Wiarda & Co., Brooklyn, N. Y.

ALUMINA.

Cochrane Chemical Co., 55 Kilby St., Boston.
General Chem. Co., 25 Broad St., New York.
Harrison Bros. & Co., Inc., Philadelphia.
A. Klipstein & Co., 122 Pearl St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., N. Y.
Penna. Salt Mfg. Co., 115 Chestnut St., Phila.
Roessler & Hasslacher Chemical Co., 100 William St., New York.

AMYL ACETATE.

Albany Chemical Co., Albany, N. Y.
Chas. Cooper & Co., 194 Worth St., New York.
Mass & Waldstein, 107 Murray St., New York.
Schoellkopf, Hartford & Hanna Co, Buffalo and New York.

AMMONIA NITRATE, PURE AND COM'L.

Geo. A. Erkenbrach, 115 Maiden Lane, N. Y.

ANILINES.

Berlin Aniline Works, 213 Water St., N. Y.
Ernst C. Bartels, 88 Wall St., New York.
C. Bischoff & Co., 88 Park Place, New York.
F. Bredt & Co., 194 Fulton St., New York.
Cassela Color Co., 182 Front St., New York.
Heller & Merz Co., 22 Cliff St., New York.
A. Klipstein & Co., 122 Pearl St., New York.
Kutroff, Pickhardt & Co., 128 Duane St., N. Y.
H. A. Metz & Co., 122 Hudson St., New York.
Schoellkopf, Hartford & Hanna Co., Buffalo and New York.

AQUA AMMONIA.

Billings-Clapp Co., Boston.
Cochrane Chemical Co., 55 Kilby St., Boston.
Geo. A. Erkenbrach, 115 Maiden Lane, N. Y.
General Chem. Co., 25 Broad St., New York.
Grasselli Chem. Co., Cleveland & New York.
Harrison Bros. & Co., Inc., Philadelphia.
Heller, Hirsh & Co., 62 William St., N. Y.
Merrimac Chem. Co., 75-77 Broad St., Boston.
Powers & Weightman, Philadelphia.
Thomsen Chemical Co., Baltimore, Md.
John C. Wiarda & Co., Brooklyn, N. Y.

ARSENIC.

Binney & Smith Co., 81 Fulton St., New York.
C. Bischoff & Co., 88 Park Place, New York.
Fuerst Bros. & Co., 2 Stone St., New York.
Harshaw, Fuller & Goodwin Co., Cleveland, O.
Edw. Hill's Sons & Co., 71 Pine St., N. Y.
A. Klipstein & Co., 122 Pearl St., New York.
McKesson & Robbins, 91 Fulton St., N. Y.
H. A. Metz & Co., 122 Hudson St., New York.
Roessler & Hasslacher Chemical Co., 100 William St., New York.
Schoellkopf, Hartford & Hanna Co., Buffalo and New York.
John C. Wiarda & Co., Brooklyn, N. Y.
Isaac Winkler & Bro., Cincinnati, Ohio.

ASPHALTUM.

American Asphalt Association, St. Louis, Mo.
John S. Lamson & Bro., 77 Maiden Lane, N. Y
Melchior, Armstrong & Dessau, 32 Broadway.

BARYTES.

Ernst C. Bartels, 88 Wall St., New York.
Geo. G. Blackwell, Sons & Co., Ltd., The Albany, Liverpool, Eng.
Fuerst Bros. & Co., 2 Stone St., New York.
Gabriel & Schall, 205 Pearl St., New York.
Nulsen, Klein & Krausse Mfg. Co., St. Louis.
John C. Wiarda & Co., Brooklyn, N. Y.

BEESWAX.

W. H. Bowdlear & Co., Boston, Mass.
Smith & Nichols, 145 Front St., New York.

BENZOLS AND COAL TAR NAPHTHAS.

Barrett Mfg. Co., Land Title Bldg., Phila.

BI-CARB. SODA.

American Chemical Co., Cincinnati, O.
Church & Dwight Co., 64-65 Wall St., N. Y.
Diamond Soda Works, Milwaukee, Wis.
Edw. Hill's Sons & Co., 71 Pine St., N. Y.
Penna. Salt Mfg. Co. 115 Chestnut St., Phila.

BI-CARB. SODA (Continued).

Powers & Weightman, Philadelphia.
Thomsen Chemical Co., Baltimore, Md.

BICHROMATE OF POTASH.

Fergusson Bros., Philadelphia.
Powers & Weightman, Philadelphia.
Roessler & Hasslacher Chemical Co., 100 William St., New York.
The Selling Co., 186 Front St., New York.

BIRD SEED.

Albert Dickinson Co., Chicago.

BISULPHINE OF CARBON.

Billings-Clapp Co., Boston.
Chas. Cooper & Co., 194 Worth St., New York.
Geo. A. Erkenbrach, 115 Maiden Lane, N. Y.
Powers & Weightman, Philadelphia.
E. R. Taylor, Penn Yan, N. Y.
J. H. Wheeler & Co., 567 Smith St., Brooklyn, New York.

BISULPHIDE OF SODA.

Cochrane Chemical Co., 55 Kilby St., Boston.
General Chemical Co., 25 Broad St., New York.
Grasselli Chemical Co., Cleveland & New York.
Kutroff, Pickardt & Co., 128 Duane St., N. Y.
Merrimac Chem. Co., 75-77 Broad St., Boston.
The Selling Co., 186 Front St., New York.

BLEACHING POWDER.

Acker Process Co., Niagara Falls, N. Y.
American Chemical Co., Cincinnati, O.
Arnold, Hoffman & Co., Inc., Providence.
The Dow Chemical Co., Midland, Mich.
Fergusson Bros., Philadelphia.
Fuerst Bros. & Co., 2 Stone St., New York.
Edw. Hill's Sons & Co., 71 Pine St., N. Y.
Hollingsworth & Peterson, Philadelphia.
A. Klipstein & Co., 122 Pearl St., New York.
James Lee & Co., 76 William St., New York.
Linder & Meyer, 89 State St., Boston.
J. L. & D. S. Riker, 46 Cedar St., New York.
Roessler & Hasslacher Chemical Co., 100 William St., New York.
Thomsen Chemical Co., Baltimore, Md.
Wing & Evans, 22 William St., New York.
Isaac Winkler & Bro., Cincinnati, Ohio.

BLUE VITRIOL.

Fergusson Bros., Philadelphia.
General Chemical Co., 25 Broad St., New York.
Grasselli Chem. Co., Cleveland & New York.
Penna. Salt Mfg. Co., 115 Chestnut St., Phila.
Roessler & Hasslacher Chemical Co., 100 William St., New York.
The Selling Co., 186 Front St., New York.
John C. Wiarda & Co., Brooklyn, N. Y.

BONE BLACK.

Ernst C. Bartels, 88 Wall St., New York.
Binney & Smith Co., 81 Fulton St., New York.
Lister's Agri. Chem. Wks., 26 B'way, N. Y.
Michigan Carbon Works, Detroit, Mich.
Seaver & Co., 120 Milk St., Boston.
Wegelin & Wilckes Black Mfg. Co., 50 Cliff St., New York.

BORACIC ACID.

Pacific Coast Borax Co., 100 William St., N. Y.
Chas. Pfizer & Co., New York.
Roessler & Hasslacher Chemical Co., 100 William St., New York.
John C. Wiarda & Co., Brooklyn, N. Y.

BORAX.

Pacific Coast Borax Co., 100 William St., N. Y.
Chas. Pfizer & Co., New York.
John C. Wiarda & Co., Brooklyn, N. Y.

CALCIUM CHLORIDE.

Carbondale Chemical Co., Carbondale, Pa.
Roessler & Hasslacher Chemical Co., 100 William St., New York.
Wing & Evans, 22 William St., New York.

CAMPHOR.

American Camphor Refining Co., 14 Fulton St. Boston, and 5 Platt St., New York.
H. J. Baker & Bro., 100 William St., N. Y.
Chas. Pfizer & Co., New York.
W. F. Simes & Son, 921 Real Estate Trust Bldg., Philadelphia, Pa.

CARBOLIC ACID.

Barrett Mfg. Co., Philadelphia.
Billings-Clapp Co., Boston.
Fuerst Bros. & Co., 2 Stone St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., N.Y.
Lehn & Fink, 120 William St., New York.
McKesson & Robbins, New York.
Merck & Co., New York.
Powers & Weightman, Philadelphia.
Schieffelin & Co., 172 William St., New York.
Schoellkopf, Hartford & Hanna Co., Buffalo, and New York.
White Tar Co., 101 N. Moore St., New York.

CARBONATE OF AMMONIA.

Fuerst Bros. & Co., 2 Stone St., New York.
Michigan Carbon Works, Detroit.

CARBONATE OF POTASH.

Fergusson Bros., Philadelphia.
Fuerst Bros. & Co., 2 Stone St., New York.
Edw. Hill's Sons & Co., 71 Pine St., New York.
A. Klipstein & Co., 122 Pearl St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., N.Y.
James Lee & Co., 76 William St., New York.
Roessler & Hasslacher Chemical Co., 100 William St., New York.
John C. Wiarda & Co., Brooklyn, N. Y.
Isaac Winkler & Bro., Cincinnati, O.

CARBON BLACK.

Binney & Smith Co., 81 Fulton St., New York.
Godfrey L. Cabot, 100 Broad St., Boston, Mass.
Seaver & Co., 120 Milk St., Boston.
Wegelin & Wilckes Black Mfg. Co., 50 Cliff St., New York.

CASCARA

S. Heitshu & Co., 65 Front St., Portland, Ore.
J. L. Hopkins & Co., 100 William St., N. Y.
Lehn & Fink, 120 William St., New York.
McKesson & Robbins, New York.
Parke, Davis & Co., Detroit, Mich., and 92 Maiden Lane, N. Y.

CASTOR OIL.

H. J. Baker & Bro., 100 William St., N. Y.
Fuerst Bros. & Co., 2 Stone St., New York.
National Lead Co., 100 William St., New York.

CAUSTIC SODA.

Acker Process Co., Niagara Falls, N. Y.
American Chemical Co., Cincinnati, O.
Arnold, Hoffman & Co., Inc., Providence.
Fergusson Bros., Philadelphia.
Fuerst Bros. & Co., 2 Stone St., New York.
General Chemical Co., 25 Broad St., New York.
Edw. Hill's Sons & Co., 71 Pine St., New York.
Hollingsworth & Peterson, 653 Bourse, Phila.
A. Klipstein & Co., 122 Pearl St., New York.
Koenigswarter & Ebell, Linden-Hannover, Germany.
James Lee & Co., 76 William St., New York.
Linder & Meyer, 89 State St., Boston.
Penna. Salt Mfg. Co., 115 Chestnut St., Phila.

CAUSTIC SODA (Continued).

Roessler & Hasslacher Chemical Co., 100 William St., New York.
Thomsen Chemical Co., Baltimore, Md.
Welch & Welch, 121 Broad St., New York.
John C. Wiarda & Co., Brooklyn, N. Y.
Wing & Evans, 22 William St., New York.
Isaac Winkler & Bro., Cincinnati, O.

CHALK.

Charles Earl, Currie & Co., Louisville, Ky.

CHEMISTS—EXPERTS.

Dr. Peter T. Austen, 89 Pine St., New York.
Carlton Ellis, 7 Water St., Boston, Mass.
Dr. Osker Nagel, 90 Wall St., New York.

CHINA CLAY.

Geo. G. Blackwell, Sons & Co., Liverpool, England.
Fuerst Bros. & Co., 2 Stone St., New York.
Philadelphia Clay Mfg. Co., 706 Drexel Bldg., Philadelphia.
John C. Wiarda & Co., Brooklyn, N. Y.

CHLORATE OF POTASH.

Dillon & Co., 20 Cedar St., New York.
Fergusson Bros., Philadelphia.
Fuerst Bros. & Co., 2 Stone St., New York.
A. Klipstein & Co., 122 Pearl St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., New York.
Linder & Meyer, 89 State St., Boston.
R. W. Phair, 16 Platt St., New York.
J. L. & D. S. Riker, 46 Cedar St., New York.
Roessler & Hasslacher Chem. Co., 100 William St., New York.
Rogers & Pyatt, 78 Maiden Lane, New York.
Schoellkopf, Hartford & Hanna Co., Buffalo and New York.

CHLORATE OF SODA.

Fuerst Bros. & Co., 2 Stone St., New York.
A. Klipstein & Co., 122 Pearl St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., New York.
J. L. & D. S. Riker, 46 Cedar St., New York.
Roessler & Hasslacher Chem. Co., 100 William St., New York.

CHLORIDE OF ZINC.

Ernst C. Bartels, 88 Wall St., New York.
Berlin Aniline Works, 215 Water St., N. Y.
Cochrane Chemical Co., 55 Kilby St., Boston.
Fuerst Bros. & Co., 2 Stone St., New York.
General Chemical Co., 25 Broad St., N. Y.
Grasselli Chemical Co., Cleveland and N. Y.
A. Klipstein & Co., 122 Pearl St., New York.
Roessler & Hasslacher Chem. Co., 100 William St., New York.

CHLOROFORM.

Albany Chemical Co., Albany, N. Y.
Billings-Clapp Co., Boston.
Mallinckrodt Chemical Works, St. Louis, Mo.
Merck & Co., New York.
N. Y. Quinine & Chemical Works, New York.
Chas Pfizer & Co., 81 Maiden Lane, N. Y.
Powers & Weightman, Philadelphia.
Roessler & Hasslacher Chem. Co., 100 William St., New York.

COAL TAR OILS.

Barrett Mfg. Co., Philadelphia.
Fuerst Bros. & Co., 2 Stone St., New York.
Wegelin & Wilckes Black Mfg. Co., 50 Cliff St., New York.

COAL TAR PRODUCTS.

Barrett Mfg. Co., Philadelphia.
Berlin Aniline Works, 213 Water St., N. Y.
Ernst C. Bartels, 88 Wall St., New York.
C. Bischoff & Co., 88 Park Place, N. Y.
F. Bredt & Co., 194 Fulton St., New York.
Fuerst Bros. & Co., 2 Stone St., New York.
A. Klipstein & Co., 122 Pearl St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., New York.
H. A. Metz & Co., 122 Hudson St., New York.
Roessler & Hasslacher Chem. Co., 100 William St., New York.
Schoellkopf, Hartford & Hanna Co., Buffalo and New York.
The Selling Co., 186 Front St., New York.
Wegelin & Wilckes Black Mfg. Co., 50 Cliff St., New York.

COCAINE.

C. Bischoff & Co., 88 Park Place, N. Y.
Mallinckrodt Chemical Works, St. Louis, Mo.
Merck & Co., New York.
N. Y. Quinine & Chemical Works, New York.
R. W. Phair, 16 Platt St., New York.
Powers & Weightman, Philadelphia.
Roessler & Hasslacher Chem. Co., 100 William St., New York.
Schieffelin & Co., 172 William St., New York.

COCOANUT OIL.

Fuerst Bros. & Co., 2 Stone St., New York.
Edw. Hill's Sons & Co., 71 Pine St., N. Y.
James Lee & Co., 76 William St., New York.
Paterson, Boardman & Co., 133 Front St., New York.
Welch & Welch, 121 Broad St., New York.
Isaac Winkler & Co., Cincinnati, O.

CODLIVER OIL.

A. W. Dodd & Co., Gloucester, Mass.
Peder Devold, Aalesund, Norway.
Isdahl & Co., Bergen, Norway.
Otto S. Jervell, Aalesund, Norway.
Lehn & Fink, 120 William St., New York.
Geo. H. Leonard & Co., Boston.
G. B. Martin, 95 William St., New York.
McKesson & Robbins, New York.
Parke, Davis & Co., Detroit, Mich., and 92 Maiden Lane, New York.
Schieffelin & Co., 172 William St., New York.

COLD WATER PAINT.

Columbia Refining Co., 32 B'way, New York.
Muralo Co., New Brighton, S. I., N. Y.

COLOR CARDS.

Kinsey & Johnston, Cincinnati, Ohio.

COPPERAS.

American Steel & Wire Co., Chicago & N. Y.
General Chemical Co., 25 Broad St., N. Y.
Harshaw, Fuller & Goodwin Co., Cleveland and New York.
Penna. Salt Mfg. Co., 115 Chestnut St., Philadelphia.
Powers & Weightman, Philadelphia.
S. P. Wetherill Co., New York & Phila.
C. K. Williams & Co., Easton, Pa.

CORN OIL.

Elbert & Gardner, Produce Exchange, N. Y.

COTTONSEED OIL.

American Cotton Oil Co., 27 Beaver St., N. Y.
J. R. C. Boyer, Memphis, Tenn.
Elbert & Gardner, Produce Exchange, N. Y.
Florida Cotton Oil Co., Jacksonville, Fla.
Fuerst Bros. & Co., 2 Stone St., New York.
Globe Refinery Co., Louisville, Ky.
Kentucky Refining Co., Louisville, Ky.
Louisville Cotton Oil Co., Louisville, Ky.
Procter & Gamble, Cincinnati, Ohio.

COTTONSEED OIL (Continued).

Seaboard Refining Co., New Orleans, La.
Southern Cotton Oil Co., 11 Broadway, N. Y.
Trinity Cotton Oil Co., Dallas, Tex.

CREAM TARTAR.

Chas. Pfizer & Co., New York.
Tartar Chemical Co., 92 William St., N. Y.

CRUDE DRUGS.

Dodge & Olcott, 86 William St., New York.
J. L. Hopkins & Co., 100 William St., N. Y.
Lehn & Fink, 120 William St., New York.
McKesson & Robbins, 91 Fulton St., N. Y.
Parke, Davis & Co., Detroit, Mich., and 92 Maiden Lane, New York.
Schieffelin & Co., New York.
Thurston & Braidich, 128 William St., N. Y.

CYANIDE.

James Lee & Co., 76 William St., New York.

DEGRAS.

Fuerst Bros. & Co., 2 Stone St., New York.
A. Klipstein & Co., 122 Pearl St., New York.
Geo. H. Leonard & Co., Boston.

DOUBLE MANURE SALT.

German Kali Works, 93 Nassau St., N. Y.
Hamilton H. Salmon & Co., 88 Wall St., N. Y.
Heller, Hirsh & Co., 62 William St., New York.

DRUG MILLERS.

J. L. Hopkins & Co., 100 William St., N. Y.

DRY COLORS.

American Steel & Wire Co., New York.
Ernst C. Bartels, 88 Wall St., New York.
Geo. G. Blackwell, Sons & Co., Ltd., The, Albany, Liverpool, England.
Cawley, Clarke & Co., Newark, N. J.
Felix Fesandie, 192 Fulton St., New York.
Fuerst Bros. & Co., 2 Stone St., New York.
Gabriel & Schall, 205 Pearl St., New York.
Harrison Bros. & Co., Inc., Philadelphia.
Morris Herrmann & Co., 68 William St., N. Y.
A. Klipstein & Co., 122 Pearl St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., N. Y.
Bruno Lampel, Cologne, Ehrenfeld-on-the-Rhine, Germany.
Merrimac Chem. Co., 75-77 Broad St., Boston.
Schroeder & Stadelmann, Oberlahnstein, Germany.
A. W. Smith, Ltd., 79 Duane St., New York.
The S. P. Wetherill Co., New York & Phila.
C. K. Williams & Co., Easton, Pa.

DYESTUFFS.

Arnold, Hoffman & Co., Providence, R. I.
Ernst C. Bartels, 88 Wall St., New York.
Berlin Aniline Works, 215 Water St., N. Y.
C. Bischoff & Co., 88 Park Place, New York.
F. Bredt & Co., 194 Fulton St., New York.
Cassela Color Co., 182 Front St., New York.
E. Fassbender & Co., Rotterdam, Holland.
Felix Fesandie, 192 Fulton St., New York.
Fuerst Bros. & Co., 2 Stone St., New York.
A. Klipstein & Co., 122 Pearl St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., N. Y.
John D. Lewis, 304 Exchange Pl., Prrovidence.
H. A. Metz & Co., 122 Hudson St., New York.
Roger & Schultz & Co., Trieste, Austria.
Schoellkopf, Hartford & Hanna Co., Buffalo and New York.

DYEWOOD EXTRACTS.

A. Klipstein & Co., 122 Pearl St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., N. Y.
John D. Lewis, Providence, R. I.
Geo. H. Leonard & Co., Boston.
The Sharpless Dyewood Extract Co., 648-651 Bourse, Philadelphia.

ESSENTIAL OILS.

Berlin Anilin Works, 213 Water St., N. Y.
Antoine Chiris, 18-20 Platt St., New York.
Dodge & Olcott, 86 William St., New York.
P. R. Dreyer, 68 Broad St., New York.
Fuerst Bros. & Co., 2 Stone St., New York.
August Giese & Son, 4 Cedar St., New York.
D. W. Hutchinson, 5 Cedar St., New York.
Lehn & Fink, 120 William St., New York.
Magnus & Lauer, 92 Pearl St., New York.
McKesson & Robbins, 91 Fulton St., N. Y.
F. M. Rudd, Bronson, Mich.
Schieffelin & Co., 172 William St., New York.
Sozio & Andrioli, Grasse, France.
A. M. Todd, Kalamazoo, Mich.

ETHERS.

Billings-Clapp Co., Boston.
Chas. Cooper & Co., 194 Worth St., New York.
Geo. A. Erkenbrach, 115 Maiden Lane, N. Y.
Heyden Chemical Works, 40 Pine St., N. Y.
Powers & Weightman, Philadelphia.

FERTILIZING MATERIALS.

Chilean Nitrate Works, 12 John St., N. Y.
Fuerst Bros. & Co., 2 Stone St., New York.
Heller, Hirsh & Co., 62 William St., New York.
Lister's Agri. Chem. Works, 26 B'way, N. Y.
German Kali Works, 93 Nassau St., N. Y.
H. H. Salmon & Co., 88 Wall St., New York.

FLAX SEED.

Albert Dickinson Co., Chicago.
H. Trilling & Co., 145 W. Lake St., Chicago.

FLUORSPAR AND CHALK.

Geo. G. Blackwell, Sons & Co., Liverpool, England.
Charles Earl Currie & Co., Louisville, Ky.
John C. Wiarda & Co., Brooklyn, N. Y.

FORMALDEHYDE.

C. Bischoff & Co., 87 Park Place, New York.
Fries Bros., 92 Reade St., New York.
Fuerst Bros. & Co., 2 Stone St., New York.
Heyden Chemical Works, 40 Pine St., N. Y.
A. Klipstein & Co., 122 Pearl St., New York.
Koenigswarter & Ebell, Linden-Hannover, Germany.
Merck & Co., New York.
H. A. Metz & Co., 122 Hudson St., New York.
Roessler & Hasslacher Chem. Co., 100 William St., New York.
John C. Wiarda & Co., Brooklyn, N. Y.

FULLER'S EARTH.

Geo. G. Blackwell, Sons & Co., Liverpool, England.
Fuerst Bros. & Co., 2 Stone St., New York.

FUSEL OIL.

Albany Chemical Co., Albany, N. Y.
Mass & Waldstein, 107 Murray St., New York.
Schoellkopf, Hartford & Hanna Co., Buffalo and New York.

GELATINE.

Michigan Carbon Works, Detroit.

GELATINE CAPSULES.

H. Planten & Son, 224 William St., New York.
Billings-Clapp Co., Boston.

GILSONITE.

American Asphalt Association, St. Louis, Mo.

GLAUBER'S SALTS.

American Chemical Co., Cincinnati, O.
Cochrane Chemical Co., 55 Kilby St., Boston.
General Chemical Co., 25 Broad St., New York.
Grasselli Chemical Co., Cleveland and N. Y.
Wm. F. Jobbins, Aurora, Ill.

THE UNITED ALKALI COMPANY

LIMITED.

30 James St., LIVERPOOL, ENGLAND.

Manufacturers of Sulphuric Acid

Brown Vitriol, Rectified Vitriol, Monohydrate, High Test Sulphate of Soda or Salt Cake, in Bulk, or Ground and Packed, Hydrochloric Acid, Common or Purified. Chloride of Calcium, Calcium Carbide.

Acetic Acid, Acetate of Soda, Acetone

Bleaching Powder

Chlorate of Potash, Soda and Baryta

Soda Ash, all Strengths, by Ammonia and Le Blanc Processes, Refined Alkali, all Strengths, Bicarbonate of Soda, High Strength, Crystal Carbonate,

Caustic Soda 60% to 77%

Caustic and Carbonate of Potash

Cyanides, Sal Ammoniac, Muriate of Ammonia, Sulphate of Ammonia, Sulphate of Alumina,

FERTILIZERS

Salt, Common, White and Rock, Chromic Acid,

STRONTIA SALTS

Oxide, Hydrate, Carbonate, Manganate of Soda, Peroxide of Manganese, Hydrated Peroxide of Manganese for Gas Purification.

Silicate Soda, B. S. Copper, Copper Precipitate, Purple Ore, Sulphate of Copper

SULPHUR

Rock, Roll, Flowers,

Chloride of Magnesium, Ultramarine, Sulphide of Sodium

GLAUBER'S SALTS (Continued).

Merrimac Chem. Co., 75-77 Broad St., Boston.
Powers & Weightman, Philadelphia.
Thomsen Chemical Co., Baltimore, Md.
John C. Wiarda & Co., Brooklyn, N. Y.

GLUE.

Lister's Agri. Chem. Works, 26 B'way, N. Y.
Michigan Carbon Works, Detroit.
Rogers & Pyatt, 78 Maiden Lane, New York.

GLYCERINE.

Fuerst Bros. & Co., 2 Stone St., New York.
Grasselli Chemical Co., Cleveland and N. Y.
Harshaw, Fuller & Goodwin Co., Cleveland, O.
Wm. F. Jobbins, Aurora, Ill.
A. Klipstein & Co., 122 Pearl St., New York.
Procter & Gamble Co., Cincinnati, O.

GRAPHITE.

Geo. G. Blackwell, Sons & Co., Liverpool, England.
Joseph Dixon Crucible Co., Jersey City, N. J.

GUMS.

Arnold, Hoffman & Co., Providence, R. I.
F. Bredt & Co., 194 Fulton St., New York.
Fuerst Bros. & Co., 2 Stone St., New York.
J. L. Hopkins & Co., 100 William St., N. Y.
Alfred A. Keun & Co., Smyrna, Turkey.
Lehn & Fink, 120 William St., New York.
McKesson & Robbins, 91 Fulton St., N. Y.
Parke, Davis & Co., 90 Maiden Lane, N. Y.
Roger Schultz & Co., Trieste, Austria.
Schieffelin & Co., 172 William St., New York.
Thurston & Braidich, 128 William St., N. Y.

HYDROCHLORIC ACID.

General Chemical Co., 25 Broad St., New York.
Harshaw, Fuller & Goodwin Co., Cleveland, O.
John C. Wiarda & Co., Brooklyn, N. Y.

HYPOSULPHITE OF SODA.

Cochrane Chemical Co., 55 Kilby St., Boston.
Grasselli Chemical Co., Cleveland and N. Y.
A. Klipstein & Co., 122 Pearl St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., New York.
James Lee & Co., 76 William St., New York.
Merrimac Chem. Co., 75-77 Broad St., Boston.
Roessler & Hasslacher Chem. Co., 100 William St., New York.
The Selling Co., 186 Front St., New York.
Thomsen Chemical Co., Baltimore, Md.

INDIGO.

Arnold, Hoffman & Co., Inc., Providence, R. I.
General Chem. Co., 25 Broad St., New York.
A. Klipstein & Co., 122 Pearl St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., N Y.
H. A. Metz & Co., 122 Hudson St., New York.
Taylor & Barker, Lowell, Mass.

IVORY AND DROP BLACK.

Ernst C. Bartels, 88 Wall St., New York.
Seaver & Co., 120 Milk St., Boston.

LAMP BLACK.

Bihn & Wolff, Bridesburg, Phila., Pa.
Binney & Smith Co., 81 Fulton St., New York.
Seaver & Co., 120 Milk St., Boston.
Wegelin & Wilckes Black Mfg. Co., 50 Cliff St., New York.

LINSEED OIL.

American Linseed Co., 100 William St., N. Y.
Atlantic White Lead and Linseed Oil Co., 100 William St., New York.
National Lead Co., 100 William St., New York.
Spencer Kellogg, Buffalo, N. Y.
A. L. Webb & Sons, Baltimore, Md.

LITHOPONE.

Geo. G. Blackwell, Sons & Co., Liverpool, England.
Ernst C. Bartels, 88 Wall St., New York.
Grasselli Chemical Co., Cleveland and N. Y.
Gabriel & Schall, 205 Pearl St., New York.
The Heller & Merz Co., 22 Cliff St., N. Y.

MANGANESE.

George G. Blackwell, Sons & Co., Ltd., The, Albany, Liverpool, England.
Harshaw, Fuller & Goodwin Co., Cleveland and New York.
Kendall & Flick, Washington, D. C.
A. Klipstein & Co., 122 Pearl St., New York.
Jno. S. Lamson & Bro., 77 Maiden Lane, N. Y.
James Lee & Co., 76 William St., New York.
Roessler & Hasslacher Chemical Co., 100 William St., New York.
John C. Wiarda & Co., Brooklyn, N. Y.

MANUFACTURERS' REPRESENTATIVE.

Burrows-Webber, St. Louis, Mo.

MENHADEN OIL.

Geo. H. Leonard & Co., Boston.
W. A. Robinson & Co., New Bedford, Mass.
Frank L. Young & Kimball, New Bedford, Mass.

MORPHINE.

Merck & Co., New York.
N. Y. Quinine & Chemical Works, New York.
Powers & Weightman, Philadelphia.
Rosengarten & Sons, Philadelphia.
Zimmer & Co., Frankfort-on-Main, Germany.

MURIATIC ACID.

Cochrane Chemical Co., 55 Kilby St., Boston.
Chas Cooper & Co., 194 Worth St., New York.
General Chem Co., 25 Broad St., New York.
Grasselli Chemical Co., Cleveland and N. Y.
Merrimac Chem. Co., 75-77 Broad St., Boston.
Penna. Salt Mfg. Co., 115 Chestnut St., Phila.
Powers & Weightman, Philadelphia.
Thomsen Chemical Co., Baltimore, Md.

MYRBANE.

Barrett Mfg. Co., Philadelphia.
Berlin Aniline Works, 213 Water St., N. Y.
The Selling Co., 186 Front St., New York.

NAPHTHA.

Barrett Mfg. Co., Philadelphia.
Crew Levick Company, Philadelphia.
Standard Oil Co., New York.
The Paragon Refining Co., Toledo, O.

NAPHTHALINE.

Barrett Mfg. Co., Philadelphia, Pa.
Fuerst Bros. & Co., 2 Stone St., New York.
The Roessler & Hasslacher Chemical Co., 100 William St., New York.
Schoellkopf, Hartford & Hanna Co., Buffalo and New York.
Wegelin & Wilckes Black Mfg. Co., 50 Cliff St., New York.
White Tar Co., 101 N. Moore St., New York.

NITRATE OF SODA.

Battelle & Renwick, 163 Front St., New York.
Chilean Nitrate Works, 12 John St., New York.
Heller, Hirsh & Co., 62 William St., New York.

NITRIC ACID.

Chas. Cooper & Co., 194 Worth St., New York.
Cochrane Chemical Co., 55 Kilby St., Boston.
General Chemical Co., 25 Broad St., New York.
Grasselli Chemical Co., Cleveland and N. Y.
Harrison Bros. & Co., Inc., Philadelphia, Pa.
Merrimac Chem. Co., 75-77 Broad St., Boston.
Penna. Salt Mfg. Co., 115 Chestnut St., Phila.
J. Lee Smith & Co., 59 Frankfort St., N. Y.
Powers & Weightman, Philadelphia.
Thomsen Chemical Co., Baltimore, Md.

OCHER.

Ernst C. Bartels, 88 Wall St., New York.
Bruno Lampel, Cologne, Ehrenfeld-on-the-Rhine, Germany.
Schroeder & Stadelmann, Oberlahnstein, Germany.
C. K. Williams & Co., Easton, Pa.

OIL OF VITRIOL (Sulphuric Acid).

Cochrane Chemical Co., 55 Kilby St., Boston.
Chas. Cooper & Co., 194 Worth St., New York.
General Chem. Co., 25 Broad St., New York.
Grasselli Chemical Co., Cleveland and N. Y.
Harrison Bros. & Co., Inc., Philadelphia, Pa.
Kuttroff, Pickhardt & Co., 128 Duane St., New York.
Merrimac Chem. Co., 75-77 Broad St., Boston.
Penna. Salt Mfg. Co., 115 Chestnut St., Phila.
Powers & Weightman, Philadelphia.
T. P. Shepard & Co., Providence, R. I.
Thomsen Chemical Co., Baltimore, Md.

OLIVE OIL.

F. Bredt & Co., 194 Fulton St., New York.
A. W. Dodd & Co., Gloucester, Mass.
Fuerst Bros. & Co., 2 Stone St., New York.
Lehn & Fink, 120 William St., New York.
Geo. H. Leonard & Co., Boston.
Schieffelin & Co., 172 William St., New York.

OPIUM.

Edw. Hill's Sons & Co., 71 Pine St, New York.
Alfred A. Kuen & Co., Smyrna, Turkey.
A. Lavina & Co., Smyrna (Asia Minor).
Merck & Co., New York.
N. Y. Quinine & Chemical Works, New York.
Rosengarten & Sons, Philadelphia.
Schieffelin & Co., 172 William St., N. Y.

OXIDE OF IRON.

C. K. Williams & Co., Easton, Pa.

OXIDE OF ZINC.

Ernst C. Bartels, 88 Wall St., New York.
Gabriel & Schall, 205 Pearl St., New York.
New Jersey Zinc Co., 71 B'way, N. Y.
J. Lee Smith & Co., 59 Frankfort St., N. Y.
S. P. Wetherell Co., New York and Phila.
John C. Wiarda & Co., Brooklyn, N. Y.

PALM OIL.

Elbert & Gardner, Produce Exchange, N. Y.
James Lee & Co., 76 William St., New York.

PAINTS.

Adams & Elting Co., Chicago, Ill.
American Steel & Wire Co., New York and Chicago.
Samuel H. French & Co., Philadelphia.
Harrison Bros. & Co., Inc., Philadelphia.
John Lucas & Co., Philadelphia.
John W. Masury & Son, New York.
Benj. Moore & Co., Brooklyn, N. Y.
John B. Phillips, 76 Ninth St., Brooklyn, N. Y.
F. O. Pierce Co., 170 Fulton St., New York.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Prince Mfg. Co., 71 Maiden Lane, New York.
J. Lee Smith & Co., 59 Frankfort St., N. Y.
U. S. Smelting Co., Canon City, Colo.
S. P. Wetherill Co., New York & Phila.
C. K. Williams & Co., Easton, Pa.

PARAFFINE OIL.

Manufacturers' Paraffine Co., Chester, Pa.
Standard Oil Co., New York.
Sun Oil Co., Toledo, O.
Tidewater Oil Co., New York.

PARAFFINE WAX.

Crew Levick Co., Philadelphia.
Fuerst Bros. & Co., 2 Stone St., New York.
Manufacturers' Paraffine Co., Chester, Pa.
Smith & Nichols, 145-147 Front St., New York.
Standard Oil Co., 408 W. 14th St., New York.
Tidewater Oil Co., 12 Broadway, New York.

PETROLEUM.

Atlantic Refining Co., Franklin, Pa.
Borne, Scrymser Co., 80 South St., New York.
Canfield Oil Co., Cleveland, O.
Crew Levick Co., Philadelphia.
Gulf Oil Refining Co., Pittsburgh, Pa.
The Paragon Refining Co., Toledo, O.
Standard Oil Co., New York.
Sun Co., Pittsburgh, Pa.
Union Petroleum Co., 135 S. 2d St., Phila.
Waters-Pierce Oil Co., 816 Olive St., St. Louis.

PHOSPHORUS.

General Chem. Co., 608 Bourse, Philadelphia.

PRUSSIATE OF POTASH.

Fuerst Bros. & Co., 2 Stone St., New York.
A. Klipstein & Co., 122 Pearl St., New York.
Kuttroff, Pickhardt & Co., 128 Duane St., New York.
The Roessler & Hasslacher Chemical Co., 100 William St., New York.

PLUMBAGO.

Geo. G. Blackwell, Sons & Co., Liverpool, England.
Joseph Dixon Crucible Co., Jersey City, N. J.
Paterson, Boardmon & Co., 133 Front St., New York.
Wegelin & Wilckes Black Mfg. Co., 50 Cliff St., New York.

PUTTY.

E. S. Belknap, McSherry & Moran, 234 Monroe St., New York.
John B. Phillips, 76 Ninth St., Brooklyn, N. Y.

QUININE.

Merck & Co., New York.
N. Y. Quinine & Chemical Works, 114 William St., New York.
R. W. Phair, 16 Platt St., New York.
Powers & Weightman, Philadelphia.
Roessler & Hasslacher Chemical Co., 100 William St., New York.
Rosengarten & Sons, Philadelphia, Pa.

ROOF CEMENT.

John B. Phillips, 76 Ninth St., Brooklyn, N. Y.

ROSIN.

A. L. Webb & Sons, Baltimore, Md.
Bay Naval Stores Co., New Orleans, La.

ROTTEN STONE.

Geo. G. Blackwell Sons & Co., Ltd., The Albany, Liverpool, England.
John C. Wiarda & Co., Brooklyn, N. Y.
R. J. Waddell & Co., 52 Beekman St., N. Y.

SAL AMMONIAC.

Cochrane Chemical Co., 55 Kilby St., Boston.
Fuerst Bros. & Co., 2 Stone St., New York.
Grasselli Chemical Co., Cleveland & New York.
A. Klipstein & Co., 122 Pearl St., New York.
R. W. Phair, 16 Platt St., New York.
Roessler & Hasslacher Chemical Co., 100 William St., New York.
John C. Wiarda & Co., Brooklyn, N. Y.

SAL SODA.

American Chemical Co., Cincinnati, O.
Church & Dwight Co., 63-65 Wall St., N. Y.
Diamond Soda Works, Milwaukee, Wis.
Fergusson Bros., Philadelphia.
Grasselli Chemical Co., Cleveland & New York.
Hollingsworth & Peterson, 653 Bourse, Phila.
James Lee & Co., 76 William St., New York.
Penna. Salt Mfg. Co., 115 Chestnut St., Phila.
Thomsen Chemical Co., Baltimore, Md.
Welch & Welch, 121 Broad St., New York.
John C. Wiarda & Co., Brooklyn, N. Y.
Wing & Evans, 22 William St., New York.

SALT CAKE.

General Chemical Co., 25 Broad St., New York.
Grasselli Chemical Co., Cleveland & New York.

SALTPETER.

Battelle & Renwick, 163 Front St., New York.

SEEDS.

Albert Dickinson Co., Chicago.
J. Fritzlin, Amsterdam.
J. L. Hopkins & Co., 100 William St., N. Y.
Roger Schultz & Co., Trieste, Austria.

SHELLAC.

New York Shellac Co., 220 Pearl St., N. Y.
Rogers & Pyatt, 78 Maiden Lane, New York.

SODA ASH.

American Chemical Co., Cincinnati, O.
Arnold, Hoffman & Co., Providence.
Fuerst Bros. & Co., 2 Stone St., New York.
Edw. Hill's Sons & Co., 71 Pine St., N. Y.
A. Klipstein & Co., 122 Pearl St., New York.

SODA ASH (Continued).

James Lee & Co., 76 William St., New York.
Wing & Evans, 22 William St., New York.
Isaac Winkler & Bro., Cincinnati, O.

SOLUBLE COTTON.

Billings, Clapp Co., Boston, Mass.
Chas. Cooper & Co., 194 Worth St., New York.
Geo. A. Erkenbrach, 115 Maiden Lane, N. Y.
Fabrikoid Co., Newburg, N. Y.
Maas & Waldstein, 107 Murray St., New York.

STRONTIA NITRATE.

Koenigswarter & Ebell, Linden-Hannover, Germany.
R. W. Phair, 16 Platt St., New York.
Rogers & Pyatt, 78 Maiden Lane, New York.
The Roessler & Hasslacher Chemical Co., 100 William St., New York.

STONEWARE.

Arthur J. Weeks, Akron, O.

STRYCHNINE.

Merck & Co., New York.
N. Y. Quinine & Chemical Works, New York.
Chas Pfizer & Co., 81 Maiden Lane, N. Y.
Powers & Weightman, Philadelphia.

SUGAR OF MILK.

J. L. Hopkins & Co., 100 William St., N. Y.
Merck & Co., New York.
Schoellkopf, Hartford & Hanna Co., Buffalo and New York.

SULPHATE OF AMMONIA.

American Coal Products Co., 17 Battery Place, New York.
Cochrane Chemical Co., 55 Kilby St., Boston.
Fergusson Bros., Philadelphia.
Lister's Agri. Chem. Works, 26 B'way, N. Y.

SULPHATE OF SODA.

Cochrane Chemical Co., 55 Kilby St., Boston.
General Chemical Co., 25 Broad St., N. Y.
Merrimac Chem. Co., 75-77 Broad St., Boston.
Thomsen Chemical Co., Baltimore, Md.

SULPHUR AND BRIMSTONE.

Battelle & Renwick, 163 Front St., N. Y.
General Chemical Co., 25 Broad St., N. Y.
T. & S. C. White Co., 22 Burling Slip, N. Y.

TALC.

Geo. C. Blackwell, Sons & Co., Ltd., The Albany, Liverpool, England.
National Talc Co., 19 S. William St., N. Y.
C. K. Williams & Co., Easton, Pa.

TARTARIC ACID.

Chas. Pfizer & Co., New York.
Powers & Weightman, Philadelphia.
Tartar Chemical Co., 92 William St., N. Y.

TIN CANS.

American Can Co., 11 Broadway, New York.

TURPENTINE.

Bay Naval Stores Co., New Orleans, La.
Standard Oil Co., New York.
A. L. Webb & Sons, Baltimore, Md.

VANILLA BEANS.

Dodge & Olcott, 86 William St., New York.
Thurston & Braidich, 128 William St., N. Y.

VANILLIN.

C. Bischoff & Co., 88 Park Place, New York.
Dodge & Olcott, 86 William St., New York.
Fries Bros., 92 Reade St., New York.
Heyden Chemical Works, 40 Pine St., N. Y.
A. Klipstein & Co., 122 Pearl St., New York.
Magnus & Lauer, 92 Pearl St., New York.
Warner Chemical Co., Uwchland, Pa.

VARNISH.

Harrison Bros. & Co., Inc., Philadelphia.
John W. Masury & Son, New York.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Pratt & Lambert, 176 Fulton St., New York.

VARNISH GUMS.

Edw. Hill's Sons & Co., 71 Pine St., N. Y.
F. W. Mead & Co., 133 Front St., New York.
Paterson, Boardman & Co., 133 Fulton St., New York.
Rogers & Pyatt, 80 Maiden Lane, New York.
S. Winterbourne & Co., 94 Pine St., N. Y.

WAX.

W. H. Bowdlear & Co., Boston.
Smith & Nichols, 145 Front St., New York.

WHITE LEAD.

Atlantic White Lead & Linseed Oil Co., 100 William St., New York.
Samuel H. French & Co., Philadelphia.
Harrison Bros. & Co., Inc., Philadelphia.
National Lead Co., 100 William St., N. Y.
J. Lee Smith & Co., 59 Frankfort St., N. Y.
United Lead Co., 71 Broadway, New York.

WINDOW GLASS.

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

WOOD ALCOHOL.

Chas. Cooper & Co., 194 Worth St., N. Y.
Merrimac Chem. Co., 75-77 Broad St., Boston.
A. L. Webb & Sons, Baltimore, Md.
Wood Products Co., Buffalo, N. Y.

ZINC.

The New Jersey Zinc Co., 71 B'way, N. Y.

MACHINERY MANUFACTURERS.

AUTOMATIC PRESSES.

American Process Co., 62 William St., N. Y.

BOLTING CLOTH.

P. F. Campbell, 55 Laurel St., Philadelphia.
Chas. Mill Supply Co., 15 S. William St., N. Y.
Kaestner & Co., 241 S. Jefferson St., Chicago.

BOLTING MACHINERY.

C. O. Bartlett & Snow Co., Cleveland, O.
P. F. Campbell, 55 Laurel St., Philadelphia.
Faust Machine Works, Brooklyn, N. Y.
Kaestner & Co., 241 S. Jefferson St., Chicago.

BURR STONES.

C. O. Bartlett & Snow Co., Cleveland, O.
P. F. Campbell, 55 Laurel St., Philadelphia.
Chas. Mill Supply Co., 15 S. William St., N. Y.
Kaestner & Co., 241 S. Jefferson St., Chicago.

CALDRONS.

Kaestner & Co., 241 S. Jefferson St., Chicago.
D. R. Sperry & Co., Batavia, Ill.

CEMENT MACHINERY.

C. O. Bartlett & Snow Co., Cleveland, O.
P. F. Campbell, 55 Laurel St., Philadelphia.
Chas. Mill Supply Co., 15 S. William St., N. Y.
Kaestner & Co., 241 S. Jefferson St., Chicago.

CENTRIFUGAL MILLS.

Am. Tool & Mach. Co., 109 Beach St., Boston.
P. F. Campbell, 55 Laurel St., Philadelphia.
C. H. Chavant & Co., 117 Danforth Ave., Jersey City, N. J.

COOKERS.

American Process Co., 62 William St., N. Y.

DIGESTERS.

American Process Co., 62 William St., N. Y.

DISINTEGRATORS.

P. F. Campbell, 55 Laurel St., Philadelphia.
The J. H. Day Co., Cincinnati, O.
Chas. Ross & Son Co., 18 Steuben St., Bklyn.

DRUG MILLS.

P. F. Campbell, 55 Laurel St., Philadelphia.
Chas. Mill Supply Co., 15 S. William St., N. Y.
The J. H. Day Co., Cincinnati, O.
Faust Machine Works, Brooklyn, N. Y.
Kaestner & Co., 241 S. Jefferson St., Chicago.
Raymond Bros. Impact Pulverizer Co., 143 Laflin St., Chicago, Ill.
Chas. Ross & Son Co., 18 Steuben St., Bklyn.

DRYING MACHINES.

American Process Co., 62 William St., N. Y.
American Vacuum Drying Machine Co., 120 Liberty St., New York.
The Jeffrey Manufacturing Co., Columbus, O.

ELEVATORS—STEEL.

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NEW YORK, JANUARY 4, 1904.

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THE OLD YEAR AND THE NEW.

Three years of the new century have been completed—three years which have brought prosperity to the large majority and which have been fruitful of interesting and important events. The opening years of the century augur well for the future, but what the future has in store for us must be awaited, and it behooves the prudent to prepare for adverse conditions while in the enjoyment of prosperity. The year just closed has been equally prosperous as was the year preceding, but there have been indications on the commercial, industrial and financial horizons which have admonished the careful observer of events that possibly the favorable conditions may not continue throughout another year. The prosperity of the agricultural classes goes far to assure prosperous times for all, but many changes may come to disturb the general relations between the various interests, and result in unfavorable conditions. It is useless to speculate as to what the future may have in store for us, however, and we therefore turn to the retrospective view which has only the more gratifying features for our consideration. The commercial and industrial prosperity of our country has, during the past year, exceeded the most sanguine hopes that had been entertained, and which had been encouraged by the prosperous conditions prevailing during the two years preceding. With few important exceptions, the industrial conditions have been satisfactory to an eminent degree, and the list of failures shows a most healthy condition. It is the commercial interests, however, we desire to consider, and these have passed all expectations. The total value of the exports from the United States during the eleven months shows an increase of over $97,000,000, while the value of the imports for the same period shows an increase of over $42,000,000, making the net increase in the value of our foreign commerce upwards of $139,000,000, which is certainly a gratifying exhibit, and more especially is the large increase in our favor of the balance of trade, the value of our exports exceeding that of our imports by over $391,000,000. The volume of business in the lines of trade represented by the Reporter shows that these have been benefited to the full in the growth of the country, and the year has been prosperous beyond those which have preceded, although there have been seasons of depression due to the labor complications, which have caused unusual disturbances in trade, notably in paints and dyestuffs. But even in these lines, the results of the year's operations have shown a marked gain. Reviews of the course of trade and of market conditions and values will appear in succeeding issues of the Reporter, giving such details as will prove interesting and of value for reference.

Trusting that the year before us may realize the hopes of the most optimistic, we wish the readers of the Reporter a happy and prosperous New Year.

FUSEL OIL SUPPLY INSUFFICIENT.

Abnormal is the word that most fittingly applies to the fusel oil situation, and the disparity between the limited supply and the growing fields for consumption becomes more accentuated almost every week. The value of the product lies largely in the fact that it does not attract water, and commercial industries are newly awakening to the advantage of fusel oil in their factories. The production of fusel oil is dependent upon the manufacture of spirits and alcohol, and it is estimated that from three hundred bushels of grain one gallon of the oil is derived. It is impossible to increase this yield, and in recent years, since the commercial value of fusel oil has been so forcibly established, experiments have been undertaken to find a substitute, but without avail. German and Austrian markets are responsible for possibly nine-tenths of the supply used in this country, contributing about seventy-five tons, on an average, a month. Estimates place the amount of possible consumption at more than a hundred tons a month.

Twenty-five years ago producers of spirits and alcohol were glad to have the then valueless sediment carried away without cost, and ten years later it had found a market at from twelve to fifteen cents a gallon. For the sake of comparison we publish the schedule of high and low prices which have prevailed for the crude oil in recent years:—

	1903.		1902.		1901.	
	H.	L.	H.	L.	H.	L.
Jan.....	.85	.85	.70	.70	.60	.60
Feb.....	.85	.85	.70	.70	.60	.60
March.....	.87½	.87½	.70	.70	.60	.60
April.....	.87½	.87½	.70	.70	.60	.60
May.....	.87½	.87½	.70	.70	.60	.60
June.....	.87½	.82½	.70	.70	.60	.60
July.....	.82½	.82½	.70	.70	.60	.60
Aug.....	.85	.82½	.70	.70	.60	.60
Sept.....	.85	.85	.70	.70	.60	.60
Oct.....	1.10	1.10	.70	.70	.60	.60
Nov.....	1.10	1.00	.70	.70	.60	.60
Dec.....	1.15	1.10	.85	.70	.70	.60
Year.....	1.15	.82½	.85	.70	.70	.60

During 1900 the price remained sixty cents.

JAPAN'S FIRM HOLD ON CAMPHOR.

The development of the camphor situation is awaited with not a little concern, for circumstances have seemingly combined to accentuate the uncertainty with which this product is held under the monopoly of the Japanese Government. Local dealers are not ready to ascribe the long withdrawal of supplies by that government to conditions which have culminated in the present strained relations, but under the existing state of affairs there is no question that the possibility of war has influenced the market to its current high values. Whether the neglect of the Government in marketing the camphor is because of more pressing claims upon its attention or whether the product is withheld to enhance the value of a possible war asset, no one here is in a position to state, but the latter view is credited. We have had occasion to note the advance of refined camphor three times within the last three weeks, once by one cent and twice last week, first by one cent and then by two cents. The lightness of supplies may be appreciated by the announcement that no offerings have been made by the Japanese Government for about three months. Even in the event of a release upon the firm hold by the monopoly, which has been suggested as a possibility soon after the turn of the year, no ready relief would be experienced here, for it requires about four months to land the product in this market. The general situation has aroused some interest as to the development of the experiments on synthetic camphor, which may, in time, become an important factor, but while a satisfactory result has been attained, so far as the nature and purpose of the product are concerned, it is by no means as yet a commercial article. Below we publish a summary of the high and low prices which have prevailed for refined camphor during the last four years:—

	1903.		1902.		1901.		1900.	
	H.	L.	H.	L.	H.	L.	H.	L.
Jan....	54½	54½	57	57	60½	60½	54	51
Feb....	54½	54½	57	57	60½	60½	54	52
March..	55½	54½	57	57	60½	60½	54	54
April...	55½	55½	57	57	60½	60½	58½	55½
May....	55½	55½	57	57	60½	60½	59½	58½
June....	55½	55½	57	57	60½	60½	59½	59½
July....	55½	55½	57	57	60½	60½	59½	59½
Aug....	55½	55½	57	56½	60½	57½	60	59½
Sept....	54½	54½	56	55½	57½	57½	60½	60½
Oct....	54½	54½	55½	55½	57½	56	60½	60½
Nov....	54½	54½	55½	54½	56	56	60½	60½
Dec....	58½	54½	54½	54½	57	56	60½	60½
Year...	58½	54½	57	54½	60½	56	60½	51

THE PALE ROSIN SITUATION.

The market for pale rosins has been a most peculiar one for the past several weeks and prices have been quoted entirely nominal. This was attributed principally to the decided scarcity of supply here and at primary markets, and the anxiety on the part of buyers to make purchases and also to certain short interests here, as well as in Savannah, who, it is claimed, are making an effort to cover their short sales. Holders who have moderate supplies on hand have taken advantage of the situation, and as near as could be learned, no supplies of certain pale grades could be obtained except at a good margin above the quoted prices. As a result of this business has been held in check and there was a marked indifference on the part of buyers and sellers to meet each other's views. There was renewed talk to the effect that large quantities of pale rosin are being held back in the woods by producers. Opinions, however, differ on this, some claiming that the supplies held by producers in the South may probably be carried over to the next crop and have a depressing effect on prices. Others, however, claim that no authentic statement has been received from the South regarding the quantity held back in the woods by producers and that they do not believe that the quantity is large. Such statements, it is said, have been circulated in the trade heretofore and have been found on several occasions to be unreliable.

COCOANUT OIL SITUATION.

The conditions affecting cocoanut oil in this market have been somewhat unusual of late and both Ceylon and Cochin oils have been sold at about the same price, whereas ordinarily there is a difference of about one-half cent per pound in favor of Cochin oil by reason of its superior quality. The causes leading to the conditions prevailing have also been unusual and may be stated briefly. The consumption of Ceylon oil in this country is mainly in the manufacture of soap, for which the Ceylon variety is utilized, while Cochin oil, although to some extent used by soapmakers, finds its principal application in the production of edible compounds. In Russia, the Netherlands and France, the consumption of Cochin oil is very large in the compounding of edible fats, and refining processes for Ceylon oil have been perfected to a degree which enables them to use large quantities for the same purpose. In this country the use of the better grade has extended considerably of late, but, as before stated, the principal use of cocoanut oil is for the manufacture of soap. Of late the supply of Ceylon oil has been rather light, while there has been a larger quantity of Cochin oil on the market than consumptive requirements warranted, and consequently the price of the former strengthened, while the latter declined, the two grades selling at about the same price. These conditions are only temporary and the usual difference may be expected to prevail within a short time, as the conditions are otherwise very strong and consumptive requirements increasing. Exact figures of the importation of the two oils are not available, but of the two together the imports during the last fiscal year amounted to over 28,000,000 pounds, and during the year preceding to 27,000,000 pounds. As these quantities do not exceed actual consumptive requirements, the supply of Ceylon oil is small, and as the use of this oil is increasing, the prospects are that prices will rule firmer. The position in the primary markets is also very strong for both grades, as the demand from Europe is increasing at an even greater rate than here, while the advance in ocean freight rates, on account of possible war between Japan and Russia, may cause an advance.

FRENCH OCHERS REVIEWED.

One of the more important pigments is ochery earth or, as it is commercially known, ocher, a natural deposit of sesqui oxide of iron and clay and silica. There are yellow, red, black, brown, green and violet ochers, found in various parts of the world and known under various names, but the most abundant is yellow ocher, the best of which comes from France, where there is an inexhaustible and easily accessible supply. The estimated production of France is about thirty thousand tons annually, of which the United States takes from one-tenth to one-eighth. The French ocher miners use a system of tanks in preparing their products and grade their ocher according to fineness. They have a number of letters to designate quality and also shades, bearing in mind that they have two grand divisions, pale or light (clair) which they designate with the letter C, and deep (fonce) which they designate by the letter F, we find the explanation of the mysterious letters on the cask heads, for instance, J; meaning joune or yellow ocher; C meaning clair or pale; L meaning lave or washed; E meaning extra and S meaning superior. In a general way the more letters there are on the cask heads, the better the quality of the ocher and in inverted order, the fewer letters, the poorer the quality of the ocher; from this of course must be exempted special designating marks. For instance, such as the initials of importers or special private trade marks, but in addition to the above we find names, for instance the word "Citron," which is used by the ocher miners to designate a special extra pale shade of ocher. Then there is an ocher which is branded "Joles," the O in this instance standing for "Or," the French word for gold or golden.

The appreciation of French ochers by color users is amply proven by the fact, that the importations in 1898, with a duty, dropped to one-half of the quantity imported the preceding year and in 1902 again reached the maximum of 1897. If French ochers were not an absolute necessary crude material, its very much greater cost could not bring it into consumption with the ochers of domestic origin.

The importations of ochers into the United States for the years of 1897 to 1902 inclusive, were as follows:—

OCHERS AND OCHER EARTHS.

	Lbs.	Value.	Lbs.	Value.
1897.....	†10,488,542	$77,483	‡14,335	$808
1898.....	*5,674,632	45,052	‡35,178	1,696
1899.....	*7,554,966	82,892	‡7,376	572
1900.....	*9,806,775	69,701	‡20,295	1,092
1901.....	*7,396,495	54,720	‡14,433	780
1902.....	*9,498,305	105,156	‡25,333	1,524

†Dry only.
*Crude not pulverized and dry.
‡Ground in oil.
§Ground in oil or water.

HEAVY CHEMICALS DURING 1903.

There have been no violent fluctuations in prices of the leading chemicals during the year just closed. They have uniformly ruled firm, and those advances which have occurred have been warranted by the increased consuming capacity of this country. In some sections deliveries were delayed not only by floods, but by the scarcity of freight cars and also from the inability of the transportation lines to supply motive power sufficient to meet the increased demands made upon them by the manufacturers of chemicals as well as by other lines of trade which were subjected to the same annoyances. These delays will probably continue until the transportation facilities have been further increased. In some instances the already large capacity of the domestic plants have been increased, for the manufacture of alkali, caustic soda and bleaching powder, and rumors have been frequent of the erection of other plants, which so far, however, have not materialized, owing, in a measure, possibly, to the wave of depression which has spread over the country, affecting very materially all classes of industrial securities, and thus, for the present, checking the further expansion of the manufacture of chemicals. In speaking more in detail, attention is naturally first attracted to alkali, the consumption of which, during the past year, has gradually shown an increase, but nothing more than the growth of the consuming capacity of the country warranted. Fluctuations in prices have been few, except now and then when rail transportation facilities have not been sufficient to promptly handle freight. In these instances, which have not been numerous, an increase over current prices have been paid for stocks that could be promptly delivered, and thus tide over the wants of consumers whose regular contract deliveries had been held up in transit. Prices for high test opened at 72½@75c. for light and 77½@80c. f. o. b. works for dense, with sales being made in bulk a shade less. These prices prevailed until early in July when the contracts for the next fire were being placed. Makers made a further rise in values at 2½c., making prices for light 77½c. and dense 82½c. f. o. b. works for bags. A large business was done for consumption, not only with the glass trade, but other consuming outlets were free buyers for delivery over 1903 and for the first half of 1904, and further sales could have been made but for the conservative policy pursued by manufacturers in not extending their sales, as had previously been done during the period of the "boom," which was reflected in large sales of alkali to consumers in excess of their current wants, which later came on the market for resale at a shade under current prices. With the edge of the "boom" off and the near approach of what promises to be an exciting Presidential election, results of which may have a more far reaching effect than many at present apprehend, manufacturers have adopted the policy of "sailing close to the wind" and, as stated above, have been conservative in booking contracts for next year's delivery.

BICARB SODA.—Prices have ruled steady during the year at 1¼c., in bulk, and 1.35c. and upward for ordinary grades, as to packing. The consumption of this article has been steadily on the increase. At times manufacturers have been pushed to keep abreast of their orders. Considerable stock has been taken for export and a further increase in the export trade is expected to follow as soon as the Western plant, whose capacity has been largely increased during the year, is in good working order. Near the close of the year makers advanced prices 5c. per hundred pounds all around, making price in bulk 1.30c. and kegs 1½c. f. o. b. works. A limited amount of English has come to hand of the extra grades especially adapted for druggists' use, at 6c. and upward and ordinary grades at 3¾c. and upward, but the demand for these grades is gradually growing less every year, as the domestic pushes to the front.

CAUSTIC SODA.—While there has been no marked fluctuations in values during the year, the consumption of this article has been steadily on the increase. To meet these growing demands from the consuming outlets, makers have increased their capacity at the various works, and this has enabled them to more promptly meet the wants of the trade; but should the coming year show a corresponding increase in the consumption of this article a further enlargement of the output will be necessary to meet not only the wants of the home consumers, but keep pace with the export demand, which during the year has shown a large increase over the previous years. The imports of foreign makes have about been eliminated from the market, though a few lots have come to hand for special requirements, but these outlets are gradually growing less, as the domestic manufacturers are steadily improving their article to meet these special wants of refiners. There have been few change s in prices, even though the cost of the raw materials have been higher than in previous years. Manufacturers have kept prices steady at 1.65@1.75c. f. o. b. works, at which not only was a large business done for this year, but a large number of contracts were booked for 1904 delivery. There were more or less delay in shipping goods promptly in the early part of the year, on account of floods, and a shortage of freight cars, causing a temporary scarcity of stocks, and those dealers who had stocks on hand took advantage of this delay and secured a temporary increase in values. Later in the year, after free buying on the part of the large soap makers and packers, for 1904 delivery, makers advanced prices 10c. per hundred, making price for high test at 1.75@1.85c. f. o. b. works, according to test, with further sales reported at these figures for prompt and forward.

SALT CAKE.—The fluctuations in prices of this article have been few and unimportant, as prices are usually fixed early in the year, and unless something unusual occurs no change is made. Prices during the year have ruled at 82½c. for glass makers' grades delivered at the various consuming centres.

SAL SODA.—Few have been the changes in value of this article during the year. The consumption has not kept pace with alkali and caustic, which have shown a large increase, and it is evident that this article as compared with previous years is gradually falling off. This does not arise from competition with foreign makes, which is almost a thing of the past, but from the fact that about all of the large soap makers use alkali in its place. Prices opened at 60c. f. o. b. works and 70c. delivered in this section, and have ruled at these figures, with slight unimportant changes, during the year. There has been only a limited demand for foreign soda, which has ruled at 65@67½c. during the year. The consumption of this article, however, is gradually growing less as the years roll around.

BLEACHING POWDER.—No article on the list has had so many fluctuations during the year. Neither has competition been so sharp as it has been in this article, both among the domestic makers and between them and their foreign competitors, who, notwithstanding the low prices, continued to ship largely to this country. From the arrangements made for the ensuing year, however, these imports will be much less, unless some unforseen contingency arises to disrupt the agreements made recently by the representatives of both the foreign and domestic makers. While it is only within the past few years that the domestic article has been a factor, yet with the present capacity of the home works largely increased and methods of manufacture being perfected, it is only a question of time, and that not far distant, when the wants of the consumers in this country will be supplied by the home manufacturers. The year opened with prices fairly steady at 1⅝c. for English and 1½c. and upward for Continental makes, but with an accumulation of stocks sales were made by second hands who had a surplus and prices were irregular at 1¼c. for English and 1⅛c. for Continental, and domestic makes at 1⅛@1¼c., according to test and make. In the summer, owing to labor troubles at the various mills, which checked the demand from this consumptive outlet, and more pressure to sell by second hands, as their stocks accumulated, prices became irregular and sales were made around 1⅛c. for the foreign makes, and domestic not to be outdone was quoted at 1@1⅛c. f. o. b. works. In August, when negotiations were pending abroad among the various makers, prices for 1904 contracts were withdrawn, though it was claimed by some that previous to this action on the part of the foreign makers large sales were made privately of both foreign and domestic makes at advantageous prices to the large consumers in this country. In October, after several meetings in this city of foreign and domestic representatives, a schedule of prices was agreed upon for 1904. Contracts at 1.25c. for English and domestic, and 1.20c. for German makes seaboard delivery for round lots and a corresponding advance for a less quantity, as agreed upon in the conference, according to quantity and terms of sale, all of which so far as known are being kept by the various agents and makers.

TRADE ITEMS.

(For other Trade Items see table of contents on page 22.)

Sharpe & Dohme sent out a New Year's card last week, extending to their friends in the trade the "compliments of the season."

The Dominion Dyewood & Chemical Co., Toronto, Canada, have favored their customers and friends with a convenient desk calendar pad for 1904.

Smith & Nichols, importers and dealers in wax, in this city, have issued a very handsome counting house calendar embellished with a landscape in colors.

Announcement has been made of the engagement of William H. Erhart, vice-president of Charles Pfizer & Co., to Mrs. E. Harriette Graves Faye, widow of James J. Faye.

J. G. Beck, a well known retail druggist of Baltimore, and Chairman of the Committee on National Legislation of the National Association of Retail Druggists, was in the city last week.

The British bark, Lady Joicy, from Chile for Savannah, with a cargo of nitrate of soda, was burned at sea December 24, seventy-five miles south of Porto Rico. The bark's cargo exploded. There were no casualties. The captain and crew reached Ponce in two small boats.

The American Steel & Wire Co., with offices in all the principal cities, has issued a pamphlet giving a list of the products of the concern, with short descriptions, and among these are copperas, venetian red and oxides of iron. The list of articles is a long one and will be sent on application.

Vice-Chancellor Emery, at Trenton, N. J., has granted an order for the New Jersey Gelatine Company, of Bound Brook, N. J., to show cause at Newark, on January 5, why a receiver should not be appointed. The application was made by the B. F. Sturtevant Company, of Boston, to whom the Gelatine Company, it is claimed, owes about $1,700 for machinery. The company, it is said, also owes about $125,000 on a mortgage on its plant and $12,000 for material. The assets are not given.

If you desire to be brought in contact with the makers of machinery which enters into the manufacture of chemicals, drugs, paints, dyestuffs, fertilizers, naval stores, varnish, white lead, cotton oil, linseed oil, lubricating oil, etc., we would respectfully refer you to the Machinery Department of this publication, which you will find on page 23. Any special information that may be desired will be gladly furnished upon application, for we are in a position to place prospective purchasers in direct communication with the manufacturers of machinery of all kinds.

From William H. Bartlett, New Bedford, Mass., we have received a conspicuous and convenient desk calendar.

The price-cutting war among the druggists of San Francisco has been terminated. The Owl Drug Company, the leading cutter, has agreed to adopt a schedule of 20c., 40c. and 80c. on 25c., 50c. and $1 articles, respectively, and not to cut under twenty per cent. less than the regular retail price of any proprietary medicine. It is expected that about all of the retail druggists of San Francisco will agree to this schedule.

At a meeting of the Western Flint Bottle Manufacturers' Protective Association, held at Indianapolis, Ind., recently, the new list adopted at Washington, D. C., November 18, where the above association was in conference with the Eastern branch, was ratified, says the Commoner and Glassworker. The discounts are as follows: 80 per cent. on carload lots; 79 per cent. on orders amounting to $1,000; 78 per cent. on $500; 76 per cent. on $200, and less than $200, 75 per cent.

The Supreme Court of Nebraska holds that "if the manufacturer of a compound or preparation according to a secret formula is himself guilty of false or misleading representations in any material respect in connection therewith, or if his trade-mark label or advertisements contain distinct false assertions, which operate to deceive the public as to its nature, composition or origin, he has no standing in a court of equity; and a suit to enjoin misuse of his trade-mark, trade-name or label is not maintainable.""

Gilpin, Langdon & Co. announce that their wholesale drug business will hereafter be conducted under the firm name of Henry B. Gilpin Company, without any change in the members constituting the firm or in the personnel of the employes connected with the business. The object of the change is to separate the jobbing drug business from the manufacturing, proprietary and milling business. Some of the old employes have been given an interest in the jobbing business, but the two firms will be under practically the same management.

The Wheeler Window Glass Jobbers' Association has begun suit for $300,000 damages in the United States Circuit Court, against the Window Glass Association. The complainant holds forth that the National Window Glass Jobbers' Association is a trust within the meaning of the statutes. It is also claimed that the above association is combined with the manufacturers of window glass, and consequently the complainant is unable to purchase glass at current prices, thus restraining commerce and trade in window glass, which is contrary to the act of Congress entitled "An act to protect trade and commerce against unlawful restraints and monopolies," approved July 2, 1890.

(For other Trade Items see table of contents on page 22.)

PETROLEUM NOTES.

On Fink Creek, Lewis county, W. Va., the South Penn Co. has completed its No. 3 on the Great Gum farm and has a 10-barrel pumper in the Gantz sand.

In the Murdockville field, Beaver county, Pa., W. C. Kennedy & Co. have completed their No. 5 on the T. H. Ackleson farm and have a small pumper.

On Kinchlo Creek, Lewis county, W. Va., the Crude Oil Co. has completed and shot No. 3 on the W. L. Hall farm and has a 30-barrel producer in the Gordon sand.

In the Salem district, in Harrison county, W. Va., the South Penn Co. has drilled its test on the S. E. West farm 12 feet into the Gordon and has a show of oil.

In the Lewisville district, in Monroe county, O., W. C. McBride has drilled his No. 3 on the G. M. Karr farm into the Big Injun sand and has a show for a 100-barrel producer.

In the Salem district, Harrison county, W. Va., the Patterson Fork Oil Co. has completed its test on the S. A. Morris farm and will have a very small pumper in the Gordon sand.

In the Brush creek field, Allegheny county, Pa., the Midland division of the South Penn Oil Co. has completed its second test on the Carver heirs' farm and has a 5-barrel pumper in the 100-foot sand.

On Rich Fork, in Monroe county, O., H. J. Barker has completed his No. 9 on the P. C. Moffit farm and will not have better than a 6-barrel pumper in the Keener sand.

In the Lewisville district, Monroe county, O., the Carter Oil Co. has drilled its test on the J. A. Devoe farm through the Berea grit and will not have better than a 5-barrel pumper.

Near Belton, Marshall county, W. Va., the South Penn Co. has drilled its second test on the L. Burley farm through the Gordon sand and will not have better than a 5-barrel pumper.

In the Bens Run district, Pleasants county, W. Va., C. F. Mercer & Co.'s No. 7 on the Mercy P. Wells farm has been drilled through the Cow Run sand and is not good for more than 3 barrels a day.

The South Penn Oil Co.'s No. 3 on the J. M. Dulaney farm, in the Pine Grove extension, Wetzel county, W. Va., has been brought in and produced 70 barrels the first 24 hours after reaching the Gordon sand.

On the east side of the Folsom district, Harrison county, W. Va., the South Penn Oil Co. has drilled No. 3 on the B. F. Heldreth farm through the Gordon sand and will have a very light pumper.

In the Scottown district, Washington county, O., the Carter Oil Co. has drilled its No. 11 on the J. A. and A. J. Watson farm into the Big Injun and has a show for an 8-barrel pumper in that formation.

In the Fallen Timber Run district, Wetzel county, W. Va., N. S. Snyder & Co. have completed their No. 3 on the N. S. Snyder farm and will not have better than a 10-barrel pumper in the Big Injun sand.

Near Friendly, in Tyler county, W. Va., the Ohio & West Virginia Oil and Gas Co. has drilled its second test on the W. R. Williamson farm through the Big Injun and has a show for a 15 or 20-barrel producer.

In the Pine Grove extension, Wetzel county, W. Va., the South Penn Oil Co. has drilled its No. 5 on the S. J. Long farm through the Gordon formation and the hole has filled up 700 feet with fluid. It will make a small producer.

In the Trail Run district, Monroe county, O., owned by the Ann Oil Co., being No. 5 on the William Bowman farm, when drilled into the Big Injun sand started to flow at the rate of 40 barrels an hour, but declined rapidly.

In the Hebron district, in Tyler county, W. Va., the South Penn Oil Co. and the American Oil Development Co. have drilled their No. 13 on the B. W. Diffenbaugh farm through the Cow run sand and will have a very light pumper.

A big independent oil company, comprising business men and capitalists, is to be launched soon at El Paso, Texas, to contest with the Waters-Pierce Oil Company for a share of the business of handling refined oil and gasoline.

In the Chester Hill district, in Morgan county, O., the Bonifant Oil Co. has completed its test well on the Miller heirs' farm and has a small pumper. In the same district H. E. Koester & Co.'s No. 6, on the M. Adrian farm, has increased its production to 30 barrels a day.

Prospecting in California is at present carried on most extensively in Ventura and Santa Barbara counties and in several of the northern counties. In Santa Barbara county, in what is known as the Santa Maria field, the prospects are brightest for successful results.

In the Plum Run district in Harrison county, O., the Ann Oil Co. has completed its No. 6 on the J. H. Melany farm and has a 5-barrel pumper. In the same district the Ohio Consolidated Oil Co. got one of the same kind when it drilled in its No. 9 on the I. T. Rainsberg farm.

Mrs. Laura Palmer McDonald, wife of Alexander McDonald, of the Standard Oil Company, died last week from paralysis, at the Waldorf-Astoria, in this city. She was stricken on Christmas Day and gradually sank without regaining consciousness. She was sixty-three years old.

Former Governor J. S. Hogg, it is said, confirms the report that he and his associates have acquired 228 acres of land situated in the heart of the Batson Prairie oil region. The price which they paid for the land is said to be $8,000 per acre, which would make the total amount of the investment $1,824,000. The property will be developed and an oil pipe line built.

In Calhoun county, W. Va., in the Yellow Creek Berea grit development, the Townsell Oil Co. has completed its No. 6 on the A. C. Fisher farm and has a 75-barrel producer. In the same locality the Lowther Oil Co. has completed its No. 9 on the James Metz farm and has a 35-barrel producer in the same formation.

In the Rays Run district, Washington county, O., the Rays Run Oil Co. has drilled its second test on the Joseph Chapman farm through the Big Injun sand and has a show for a 5-barrel pumper. Egan & Co. have completed their test on the P. F. Gaffney farm and will have a 20-barrel producer in the Big Injun sand.

In the upper end of the Pine Grove extension in Wetzel county, W. Va., the South Penn Co. has completed No. 5 on the S. J. Long farm and will have a 10 or 15-barrel pumper in the Gordon sand. The same company has completed its second test on the A. H. Jackson farm and will not have better than a 10-barrel pumper.

In the Rays run district, in Washington county, O., Tibbens & Withington have completed their No. 8 on the P. Thomas farm and have a show for a 25-barrel producer in the Big Injun sand. In the same district the Hart Oil Co. has drilled its No. 3 on the J. I. Holdren farm through the Maxon sand and has a 4-barrel pumper.

North of Marietta, Washington county, O., Hannan & Co. have completed their No. 27 on the Holmes heirs' farm and have a 30-barrel producer. In the same district James C. Immel & Co. have completed their No. 6 on the A. M. Masters farm and have a 10-barrel pumper. In the same district C. R. Hatch & Co. have completed No. 9 on the John Clark farm and have a 10-barrel pumper.

On the Island of Padernale's in the Estuary of the Orinoco, in Venezuela, there is an asphalt lake, about a kilometer long and 60 meters wide. The asphalt is solid and rather impure, and is full of crater-like holes full of liquid asphalt which gives off combustible gas. There is no doubt that this asphalt is the result of natural distillation of petroleum. There is unchanged petroleum at greater depths.

The largest oil deal in the history of the Ohio and Indiana fields has been announced and by deed executed, the entire holdings of the Enterprise Oil Company became the property of the Ohio Oil Company. The property transferred consists of 2,000 acres of leasehold and 400 acres of fee lands in Wood county, and 1,200 acres of leasehold in Hancock county, and 275 wells with an average production of 600 barrels per day. The purchase price was $600,000. About two years ago the Enterprise Oil Company acquired the property just sold to the Ohio from the Palmer Oil Company of Bowling Green, paying therefor $250,000.

The Interstate Commerce Commission has received the complaint of the Fred. G. Clark Company of Cleveland, O., against the Pittsburgh, Cincinnati, Chicago and St. Louis Railroad, alleging the exaction of unjust and unreasonable rates on shipments of oil in tank cars from Struthers and Pittsburgh to the Hoover & Allison Company of Cleveland.. The complaint says that although the petitioner owned the cars in which the oil was shipped and there was no transfer or delay in the shipments, demurrage charges of $9 and $11, respectively, on the two shipments were made. The Company requests the Interstate Commerce Commission to order the refunding of the alleged overcharge and to prevent the exaction of the alleged unjust rates.

A late telegram from Berlin states that "the negotiations between the Austrian oil syndicate on the one hand and the Americans and Russians on the other have, in spite of denials, come to a definite conclusion. One feature of the agreement is that the direct exportation of Galician petroleum is not only to continue, but is to be reorganized and extended. The Galician producers claim that the German market is indispensable to them, as the sale to the Americans, who, it is declared, resell Galician oil in Europe and Asia as the genuine American product, is not sufficient. The compact provides that half of the product of the Austrian syndicate shall go to the German-American Oil Company, which is controlled by the Standard Oil Company, and the German-Russian Naphtha Company of Berlin, representing the Nobel interests, while the second half will be sold in the open market in Germany."

Parties desiring to be brought in contact with concerns who offer bargains in machinery are respectively referred to page 27 of this issue.

In the Burning Springs district, Wirt county, W. Va., T. A. and E. P. Mellon have drilled their No. 22 on the Rathbone Oil tract through the salt sand, and, at a depth of 800 feet, have an 8-barrel pumper. In the same district William C. Edwards & Co. have completed Nos. 33 and 34 on the Rathbone tract and have a brace of small pumpers in the second Cow run sand. The Bridgewater Gas Co. has drilled its No. 3 on the Patterson farm through the Big Injun sand, and, at a depth of 1,156 feet, has a 10-barrel pumper.

OBITUARY.

William Phelps.

William Phelps, for many years identified with the drug business, died at his home in Yonkers, N. Y., on the 22d. ult. His family, who were with him, had no idea the end was so near, as he had been apparently better until some few days previous.

He was one of the pioneers in doing "detail" work among the physicians, and his hearty, cordial manner made him many friends among the profession and trade in the Western country where he traveled. For many years he was connected with the Maltine Company and later was connected with Mellin's Food Company of Boston. He retired from active work several years ago, and has resided with his family in Yonkers, where he died, in the 70th year of his age.

His son, Mr. Charles M. Phelps, who is well known in the drug line, is a member of the executive staff of the Horlick's Malted Milk Company of Racine, Wis.

Selah R. Van Duzer.

Selah R. Van Duzer died at his home in Newburgh, N. Y., on December 27, aged 80 years.

Mr. Van Duzer was at one time a well-known and prominent wholesale druggist of this city, with branches in Europe. He was a son of the late Selah R. Van Duzer, and was born in this city December 9, 1823. He retired from active business some ten years ago, and during the past year had been in poor health.

He was of a charitable disposition and appeals for help were heeded by him. He was a gentleman of the old school, and what he gave was given freely and utterly without ostentation and display. His handsome and spacious grounds and conservatories were at all times freely open to the people of Newburgh and vicinity.

Mr. Van Duzer is survived by a daughter and two sons. The daughter is the wife of Frank V. Burton, this city. One son is Henry Van Duzer, a lawyer of this city, and the other is Frederick C. Van Duzer, of London, who has charge of the London and Paris branches of the business.

CORRESPONDENCE.

The Oil, Paint and Drug Reporter assumes no responsibility for statements contained in communications printed under this heading, nor does it by such publication indorse any opinions which a correspondent may express. The Reporter deprecates the use of fictitious names by correspondents, and is of opinion that a communication which the author is unwilling to acknowledge would better remain unwritten.

Items for Members of the N. W. D. A. to Think About During 1904.

Omaha, Neb., Jan. 2, 1904.

Editor Oil, Paint and Drug Reporter:—

A season of prosperity, from 1896 to 1904. These years have been memorable in American history. Each year has shown a decided increase over the former year. For the first time in the history of our country the exports are twice as large as the imports, and the exports of manufacturers are in excess of the imports of manufactured articles. Agricultural products form a large portion of the exportation and the balance of trade is largely in favor of America.

This gives us some idea of the enormous expansion of American trade. Notwithstanding this universal prosperity we believe that a note of warning should be sounded. It is sometimes said of an individual that he cannot stand prosperity. This is particularly applicable to the American people. We welcome the return of prosperity by a revival of speculation that can only lead to one result, and that is financial ruin.

At least once in every so many years we have a period of financial stringency or hard times, directly traceable to the fact that when money is made easily and quickly it goes as easily and just as quickly. Business men, usually prudent and conservative, in prosperous times throw judgment to the winds and engage in all sorts of schemes of the get-rich-quick order. During hard times we are saving; we look after the dollars; we pay our debts; but when good times come then there is a period of spending, debt contracting and speculating and we take little thought for the morrow. That the American people are rich none will dispute. That this country is producing wealth faster than any other on the face of the earth must be conceded. It is also a fact that no other people can approach us in liberality, but we are traveling at a pretty fast gait. The incorporated trusts, the railroad mergers, extravagance in business, speculation, investment in various industrial enterprises capitalized far beyond their actual value are warnings to the conservative business man that he must be careful in the management of his affairs. The business men of to-day, many of them, are largely discounting the future. They had better call a halt and discount their bills. The condition existing among the laboring element of the country, owing to the advent of trade unionism, etc., is alarming. When the blow falls and hard times come, as come they must, labor will be the first to feel its effect, and it is high time that men who have families depending upon them for support and who are to-day able to obtain good wages, larger wages than are paid in any other country on the face of the earth, should stop and consider before they tie their own hands and the hands of the people who are furnishing them with employment.

THE POSITION OF THE JOBBER.

There was a time when the wholesale druggist not only distributed goods, but occupied a very strong position in the business world on account of his knowledge of the business in wrich he was engaged. To-day he has become simply a distributor. Slowly but surely the old type of business man is passing away, and if his services as a middle man are not worthy of support he must go out of business. The retail druggist no longer puts up his own prescriptions. They are as a rule put up for him by the large manufacturing pharmaceutical houses of the country. These goods are distributed either direct or through the middle man, or so-called wholesale druggist. Now, the question arises is the mere distributor a necessity and will the retailer pay him a living profit for his part in transferring goods from the manufacturer or importer to the retailer? To this question we are not prepared at present to give a direct answer. The middle man requires capital; a large plant; is compelled to carry a big stock of goods and handle them on a very small margin of profit. It may be, therefore, that through lack of profits he will be obliged to abandon his business later on, although this hardly seems probable. The modern jobber of drugs is now in a position where he is really dependent upon the manufacturer whose goods he distributes for a living. The tendency of the times is toward a small percentage of profit, while the expense of doing business is increasing. Keen competition among jobbers themselves and the pressure exerted by the manufacturer on the one hand and the retailer on the other toward the lowest possible cost for the distribution of goods leads the wholesale druggists to believe that the force of evolution and the survival of the fittest just at the present time bears hard upon him. He must distribute goods for the manufacture at a less price than the manufacturer will sell to the retailer or at which any combination of retailers can buy from the manufacturer. Under present conditions how is he going to do this and make a living? This is a question for manufacturers of proprietary goods to consider as well as jobbers. If the jobber is worth anything to the manufacturer as a distributor he should be protected and given a living profit on his goods. Manufactured articles should be sold through the jobber only and not distributed to the retail trade or consumer by the manufacturer.

TERMS.

There is a growing sentiment on the part of jobbers in different lines throughout the country in favor of changing the time limit to 30 days instead of 60 or 90. Considerable discussion has been had in different local associations on this subject, and a large majority are in favor of shorter credit. This can only be made effective and brought about through co-operation, and it is to be hoped that in the near future the members of the National Association of Wholesale Druggists will realize the necessity of getting together and adopting a time limit of 30 days or 1 per cent. discount for cash. Our Committee on Credits and Collections have reported from time to time in favor of selling all drugs on 30 days, with a discount of 1 per cent. for cash, but we have never been able seemingly to agree upon this proposition. The argument has been used that we sell so many goods in competition with dealers in other lines that it would be impossible for us to adopt a regular discount of 1 per cent. or make our terms 30 days. It might be that a schedule of terms and discounts would be better adapted to present conditions. Make our discount on paints, oils, drugs, etc., 30 days 1 per cent for cash; window glass, white lead, brushes, and goods of this class that are usually handled by the wholesale paint and oil houses, 60 days, 1½ per cent. discount for cash; liquors, 90 days, 3 per cent discount for cash; druggists' sundries, 2 per cent. dis-

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count for cash. This schedule, it seems to us, should be satisfactory to all. The jobber by adopting this system would be able to run his business on less capital. He would have fewer outstanding accounts and consequently decrease his losses. We now frequently sell goods on 60 days, and the customer may pay his bills when the 60 days are up, and he may take 90 days; if he does he is buying beyond his means. We therefore gain by adopting a 30-day system on this class of customers, for if we sell him on 30 days and he has always been in the habit of taking 30 days' extra time, as many customers are, we stand a reasonable show of getting our money in 60 days. Again, if a retail dealer knows that he is buying goods on 30 days' time he will be more careful in the collection of his accounts. At all events it is a move in the right direction, and we hope the suggestions made by our Committee on Credits and Collections from year to year will bear some fruit.

THE REBATE PLAN.

We are vitally interested in this plan. We have tried it and think for the most part it is a good one. It is said that its greatest advantage consists in protecting the dealer against his own foolishness, as it prevents him from selling goods goods without a profit. Why a jobber should need this safeguard against himself is a mystery. We have read of articles being sold at less than cost and the profit made on the volume of sales, but this is a proposition that we do not believe in. We believe that the rebate plan with proper safeguards thrown around it is the best plan that has yet been devised, and while there are some changes that should be made, yet on the whole it is working satisfactorily. For instance, we are of the opinion that manufacturers of proprietary medicines should sell them to the jobbing drug trade only and that they should be considered their legitimate distributors. We believe it should be considered a violation of the rebate plan for a manufacturer to sell to a retailer at any price. If the middle man is worth anything as a distributor he should be used by the proprietor and given the advantage of all he can make out of the business. There is a growing disposition on the part of proprietors to increase the number of distributors and it makes very little difference how small the dealer is if he can by some hook or crook be placed upon the proprietors' list and perhaps by the use of a little influence become a member of the N. W. D. A., he thinks his fortune is made. He will immediately proceed to buy more patent medicines than he can handle to advantage, and the result is that in time he is dividing with certain retailers in his immediate neighborhood for the purpose of reducing stock. This is not only so, but manufacturers are not content to distribute their goods through jobbing druggists. They think they must have a still greater outlet, consequently they are picking up little wholesale grocery stores in localities where a wholesale drug store could not exist and these distributors are buying quantity lots in many cases simply for the purpose of turning them over to retailers at practically first cost. In fact, we have been told by one dealer in groceries that he bought the goods simply as a matter of accommodation for some of his friends who are in the retail drug business. This state of things should not exist. The manufacturer should be honest with his distributors and the wholesale druggist should be master of the situation. We believe that this association is strong enough, powerful enough to demand of the manufacturers that they distribute their goods through jobbing druggists only and we hope that the Proprietary Committee of the N. W. D. A. will insist upon our rights. A few of the proprietary medicine manufacturers say we will not sell to the retail trade, but they are hopelessly in the minority, and a little pressure on the part of the retailer would, we think, induce them to sell retailers in full quantity lots, even if they knew these goods were to be divided. Manufacturers practically control the situation and the jobber has so far been his willing tool. Are we to continue to do business in this way, or are we to make an effort to correct the absues that have crept into our business? So far as my observation goes the average wholesaler has been content to let well enough alone. This is all well and good during a season of prosperity when we have all been able to make money, but let hard times come, with expensive establishments on our hands costing an average of at least 10 per cent. to do business, and where are we going to come out.

I am not inclined to be pessimistic, but I do believe that unless we do some active, energetic work along these lines the drug business will not be as profitable in the future even as it has been in the past.

C. F. Weller.

A Good Time Coming for the Cottonseed Industry.

Memphis, Dec. 24, 1903.

Editor Oil, Paint and Drug Reporter:—

It is my firm conviction that there is a good time coming for the cotton oil mills. I take this as my subject for my annual holiday letter to the Oil, Paint and Drug Reporter.

I base this conviction on several grounds.

MORE HARMONY.

(1) There is going to be less discord, less ruinous rivalry and competition, more of harmony and pulling together among oil mill men than heretofore. I think the growth in membership and importance of the Interstate Crushers' Association, especially the recent most successful meeting at Memphis last May, shows this clearly.

Although the combination or trust principe which has done so much for industries which were in a bad way, does not seem to be applicable to the cottonseed industry, and although the two notable trials of it in the history of the trade, while temporarily beneficial, only served finally to overestimate the erection of oil mills, nevertheless I feel that all the benefits of such combination without their evil effects can be obtained from general membership in this Interstate Crushers' Association and still further increasing its importance and field of work. Certainly every oil mill in the United States ought to be a member of this association. I shall deal with this subject further on in this letter.

A LARGER MANUFACTURING MARGIN.

(2) My second reason for believing that better times are in store for the cottonseed industry is my conviction that we are going to have next season and years following higher values for cottonseed products and a larger margin in manufacturing.

Beginning with no cottonseed products to market at all some forty years ago, we have been by leaps and bounds annually increasing the output of cottonseed products until now the entire available seed crow except a very small percentage is annually crushed. Under old conditions cottonseed products could not help selling at far less than their intrinsic value. But one or two years more will see an end to this and the annual production of cottonseed products will be stationary simply because we will then be crushing all the seed that there is to crush, while the demand will continue to increase as formerly. As the population and growth of the civilized world is constantly increasing with the constantly increasing demand for feed stuffs and fertilizers, this growing demand no longer being met by a growing production will of itself raise the price of cottonseed products to their intrinsic value compared with similar feed stuffs and fertilizers instead of remaining as now far below them in price.

PRICE OF COTTONSEED HELD DOWN.

If the oil mills insist on raising their raw products cottonseed to a price in proportion, there will of course be no greater manufacturing margin and no greater profit. There is no need of this, and this is where the Interstate Crushers' Association should come in and exert its influence, if not its authority, as well. Cottonseed are and have been not only high enough, but too high of late years for any reasonable manufacturing profit. The oil mills alone have made cottonseed worth what they are and the oil mills need, have earned and richly deserve a larger manufacturing margin. The planters are already having their good times. It is the oil mills turn next.

Fifteen to $18 per ton seems to be necessary to bring out the seed. There is absolutely no need, nor is it in the public interest to raise the price above these figures until we have reached an entirely new and permanently higher plane of values for cottonseed products. It is absurd that the oil mills should pay as they have been doing for a ton of cottonseed more than three-fourths of the value of the manufactured products from that ton. No other industry of similar proportion does as much for the owners of the raw product.

A combination to put down the price of cottonseed or to maintain it at a fixed price per ton, would probably be criminal under the laws of the Southern States. An agreement enforced by an association not to pay more than a certain definite fixed and fair proportion of the value of the products of a ton of seed for a ton of seed would not only not be criminal under any of these laws, but would be in the public interest and would insure a fair manufacturing margin at all times for the mills in existence without offering any inducement to the needless multiplication of unnecessary mills. This is a point of the utmost importance.

FIVE DOLLARS A TON LATENT VALUE.

(3) My third reason for believing that there are better times ahead in the cottonseed industry is that there are from four to five dollars per ton of value in the cottonseed, even at present prices of products, which the best of the old methods will not get out, but which recent inventions make possible.

Taking the average analysis of cottonseed from North Carolina to Texas, we will find that the average ton of seed contains 150 pounds of lint, 50 gallons of oil and 900 pounds of cake or meal. The average results obtained by the oil mills are 32½ pounds of lint, 40 gallons of oil, 800 pounds of cake and 800 pounds of hulls. Here are over 100 pounds of lint, 10 gallons of oil and 100 pounds of cake or meal available in the seed which are not obtained by the oil mill and which are certainly worth between $4 and $5 per ton. We are going to get out these extra values in the near future. We are not going to leave so much meats and oil in the hulls, nor are we going to continue always to sell two-fifths of the weight of our cottonseed which we buy at $15 to $18 per ton as crude hulls at $3 to $5 per ton.

A LONGER CRUSH FOR EVERY MILL.

(4) My fourth reason for believing in good times ahead is that the recent inventions just referred to make it possible, as it has not been heretofore, to run our hydraulic presses on 30 minutes time instead of 20 minutes time and get enough more oil to make it worth while. This will give each oil mill half as long a crush again as it now has, and will make it less necessary than before to rush into the market and bull the price of seed to get enough to keep from shutting down. This slower and more thorough pressing of the seed by the aid of the new invention will furnish more work and profitable work for our oil mills whose season of operation is now altogether too short for such expensive and elaborate plants, and it will do much to keep the price of seed down to reasonable figures.

BETTER SEED AND BETTER PRODUCTS.

(5) Not only are we going to get more of the high priced products lint, oil and cake or meal from a ton or seed, but we are going to make these better.

The foundation for this will be better care of the seed, both before and after reaching the mill. Bad weather in seed harvesting time now causes the loss of millions of dollars from the heating of seed, which loss would not occur if the seed were received sound and kept sound. We know little of the cause of the heating of seed except that moisture contributes to it, and we know little of the cure for it except that airing and drying checks it. The last crushers' convention appointed a committee, of which the writer is chairman, to confer with the new United States Government Department of Commerce with a view to inquiring thoroughly into the cause and cure of the heating of cottonseed. The writer requests all oil manufacturers to send him at their earliest convenience their estimates of the damage which results in bad years from this cause in order that he may make as effective a presentation of this matter as possible to the government authority. Its importance cannot be overestimated.

GRADES OF MEAL FOR ALL USES.

Even with sound seed there is a great variation in character of cake and meal, which is exceedingly embarrassing to buyers and causes great losses in the feeding of cattle. In view of the numerous grades of cotton and cotton oil and the great help these grades are to the buyers in selecting what they want, it is clear that only two grades, prime and off, of cottonseed meal are not enough for either present trade or manufacturing conditions, and that the time has come when we should no longer turn out cottonseed meal just as it happened to run through the mill, but should vary our methods of manufacture and manipulation so as to make the meal conform to the object for which it is to be used. For instance, what is needed for the mixers of feed stuffs should be of high proteim content, what is needed for fertilizer makers should be of high ammonia content, and what is needed for the feeders of straight meal shrould be of lower proteim and fat content so that it may be fed more safely with less waste and in greater quantities than at present. The market for cottonseed meal is capable of a very great development if the meal itself is made more uniform and with reference to the uses to which it is to be put.

RECENT AND NEW INVENTIONS.

(6) In such an undeveloped field as the cottonseed, there is much work for the inventor yet to do, and the general prejudice of oil mills against invention and patents is very unfortunate. Instead of seeking to evade or nullify good inventions or patents in our industry we ought to do our utmost to uphold and support them, so as to encourage further invention and progress. It is far better to work under the protection of a patent than to seek to evade it. If the validity of the oleomargarine patents had been maintained, and the inventors had wisely directed and controlled the new industry there would never have been the opposition and prejudice against this article to-day and the oil mills would have had a much better and wider market for their finer grades of oil. Recent inventions and those yet to come are going to help us greatly to increase the profits of the oil mills if we cordially welcome them and properly apply them to our work.

MORE SCIENTIFIC WORK.

(7) Oil manufacturers are going to study the underlying principles of cottonseed, its composition and possibilities as well as the effect of different manufacturing operations upon the products, nor are they going to continue to sell such an important product as cottonseed meal without knowing exactly what it contains and how valuable it is. Instead of being content to run "crude" mills, they are going to make this industry as scientific as the manufacture of steel, molasses, sugar and like products. Not every Tom, Dick and Harry can then build a new oil mill and hire some mechanic of none or little experience to run it profitably. Ignorance in the future is going to be very costly. Knowledge alone is going to be profitable; the work of the chemist is going to be in great demand, and manufacturers themselves are going to study so that they can utilize the chemist's work in manufacture.

CONCLUSION.

No one who has followed the ins and outs of this industry for twenty years as the writer has done, can help believing that there is a good time coming to the oil mills. We are not, however, to sit down idly and wait for it, but to set to work and bring it about. Our general method of manufacture in the United States, which consists in separating hulls and kernels, cooking the kernels free of hulls and pressing out the oil through hydraulic presses, is all right and makes the best quality of products.

IMPROVEMENT NOT REVOLUTION.

What we need is not to change, but to improve on these operations, utilizing the latest inventions and discoveries along these lines. We do not need to pay less for seed, but we should certainly not pay more for it. Content with what seed we can get, we should take care of it, work it carefully, slowly and get out of every ton all there is in it. Those who do this will find their good times close at hand.

It is my hope that there will be better times for all engaged in our industry, but the best times are going to be for those who are widest awake, most energetic and enterprising, who are not afraid of new things which have already "made good," and who beware of foolish experiments which from the very nature of the cottonseed had no hope of success from the beginning.

Sincerely hoping that these holiday thoughts may be of benefit to all who read them, I close by wishing my readers a Happy New Year.

Edwin Lehman Johnson.

Duty on Salol.

The decision of Judge Platt as given out has caused misapprehension. The decision printed in full in the Reporter of December 21, page 26, prevails, and, according to the closing paragraph, overrules the decision in the Merck case. The duty, therefore, is fixed under paragraph 67, which reads:—

Medicinal preparations containing alcohol, or in the preparation of which alcohol is used, not specially provided for, 55 cents per pound, but in no case less than 25 per cent. ad valorem.

Bark and Quinine Sales for 1904.

We announce the following dates for the Amsterdam and London cinchona bark sales and the Java quinine sales at Batavia:—

Amsterdam Bark Sale—Jan. 28, March 3, April 7, May 19, June 23, July 28, Sept. 1, Oct. 6, Nov. 10, Dec. 15.

London Bark Sale—Jan. 19, Feb. 16, March 15, April 19, May 10, June 14, July 12, Aug. 9, Sept. 13, Oct. 18, Nov. 15, Dec. 16.

Batavia Quinine Sale—Feb. 3, March 9, April 13, May 25, June 29, Aug. 3, Sept. 7, Oct. 12, Nov. 16, Dec. 21.

PAINT MARKET.

NOTE.—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on page 30.

Saturday Evening, Jan. 2, 1904.

In the general absence of business, trade was practically at a standstill and the usual holiday dullness dominated the market throughout the past week. The transactions made were confined to only such small lots as were actually needed to fill urgent wants. The undertone to prices remained steady and no changes in quotations have been made.

White Lead, Zincs, &c.

WHITE LEAD.—There has been no change in the situation since our last report. Buyers generally are only taking such stocks as their current wants require, and these for this period of the year have been unusually good. Many dealers and grinders are stocktaking and are having their deliveries held over until the turn of the year. There have been further contracts of dry lead booked for 1904 delivery with grinders and potteries at 5c. less the usual 2 per cent. discount, and other smaller contracts at 5¼c. less usual discount terms. At the close, however, there was less pressure to sell forward, as the general impression is that after the New Year opens there will be another advance in the price of pig lead. There is a fair jobbing demand for lead in oil, but at irregular prices, and range from 6¾c. less ¼c. rebate and the usual 2 per cent discount for the favorite brands, down to 5¾c. or even less for other makes, according to buyer, quantity and terms of sale. There is no change in the foreign makes of lead in oil, which are quiet but steady at 9½c. and upward for special brands as to quantity and seller.

RED LEAD.—Only such stocks as current wants require are being taken up, as buyers generally defer deliveries until after the turn of the year. While the demand for forward is slow, domestic makers are not pressing sales in the face of a possible rise in the value of the raw metal. Prices for the oxides are still more or less irregular at 5¾c. for outside makes, up to 6¼c. and up for favorite brands, as to quantity, less the usual discount terms. English is steady but quiet, at 8c. up to 8½c., as to grade and quantity. Glassmakers' grades are firm at 7¼c., though possibly 7c. might buy a limited quantity on the spot. German is a shade firmer, in sympathy with a stronger primary market, and less pressure to sell forward is noted at 6¾c. up to 8½c., as to grade and quantity.

LITHARGE.—Deliveries for prompt have been slow, but nothing unusual at this season of the year. There have been further orders booked for next year by the large consumers, who have been increasing their requirements. Prices, however, are more or less irregular, especially for the outside makes, at 5½@5¾c., but for regular makes 6¼c. and up, as to grade, quantity and terms of sale.

ORANGE MINERAL.—French is rather quiet, but nothing more than usual at the close of the year. Prices remain steady at 11c. and upward for special brands, and other makes at 10½c. and up, as to grade, packing, quantity and terms of sale. English is held steady for early spring delivery at 9c. up to 11c., as to grade, quantity and point of delivery. German on the spot is in light request, but rather more demand is reported for forward at 8¾@9c. for extra and 6¾c, and upward for ordinary grades, as to quantity and terms of sale. Domestic is in good request for forward, but light stocks restricts trade to some extent. Prices are steady at 7¾@8c., as to quantity, less the usual discount terms.

PIG LEAD.—There is a firmer undertone to the market, as reports are current that a further rise in values may be made after the opening of the New Year. Sales have been made of several hundred tons of special brands at St. Louis at 4.25c. and other grades at 4.17½c., but at the close this was bid and declined for further lots. In the local market there has been rather more demand. Stocks are limited and buyers have to take such lots as smelters can deliver promptly at 4.37½c. for common and 4.57½c. for refined. It was reported that sales had been made of foreign pig at about 4.55c. for early January delivery. Foreign markets are firmer at £11 6s. 3d. for soft Spanish and £11 10s. for English.

ZINCS.—So far the contracts booked for 1904 delivery show a considerable increase over those of 1903 for the same period. There are many orders which have been held back, but will come forward after the New Year opens. The deliveries the past week have been unusually large, both for the home trade and for export. The outlook for next season's consumption of this oxide is favorable and promises to exceed any of the previous years. Prices remain firm at 4⅝@4¾c., as to grade, quantity and terms of sale for the various brands of the New Jersey make. German is firmer, in sympathy with the primary markets at 6c. for red and 6½c. for green seal and upward, as to quantity and terms of sale. No change as yet has been made in French, which remains steady at regular prices.

Dry Colors.

REDS.

The movement of supplies into consumption has been very light and business in general has been practically at a standstill. Prices rested on a firm basis without quotable change. Prime English Venetian red was quoted firm at $1.25 and upward; American at 50c. and upward and English vermilion at 80c. and upward, and American, in bulk, at 70c.; all according to quality, quantity and terms of sale.

BLACKS.

Transactions in all grades continued to be light and the usual dullness incident to the season was apparent. The movement was confined to such small lots as were actually needed to meet immediate wants. Prices remained unchanged for carbon at 5c. and upward, and lampblacks were held on the basis of 4½c. and upward for commercial, acording to quality, quantity and terms of sale.

BLUES.

Only a small hand-to-mouth business has been done during the past week. The trade in general have been winding up their business for the season and preparing for 1904. No price changes have been made and quotations remained steady for Chinese at 29c. and upward; Prussian at 27c. and upward and soluble at 29c. and upward, acording to quantity, quality and seller.

BROWNS.

The market presented a holiday appearance and business was practically at a standstill. Transactions were in small lots. Practically all firms were engaged in stock taking. Prices remained steady in tone for Italian siennas, burnt and powdered, at 3c. and upward; and American burnt and powdered at 1½c. and upward, according to quality, quantity and terms of sale. Turkey umbers, burnt and powdered, were held on the basis of 2½c. and upward and American at 1½c. and upward, according to quality, quantity and seller.

GREENS.

Little attention was paid to business and the usual seasonable dullness during the past week was experienced. Chromes remained steady and chemically pure was quotably unchanged at 17c. and upward and extra at 12c. and upward, according to quality, quantity and terms of sale. Other grades remained steady in tone, but dull.

YELLOWS.

Only small lots changed hands and general preparations for 1904 were in evidence. Prices rested on a steady basis without change. Chrome was quoted at 11c. and upward, according to quality and seller. Ochers were firm and French was held at 1½c. and upward and domestic at $8.50 and upward, according to quality, quantity and terms of sale.

Metallic Paints.

The market was quiet and featureless and in the way of new business practicaly nothing has been done. Only scattered small lots were traded in to meet actual requirements. No renewal of business is expected until March. Prices were steady in tone and manu-

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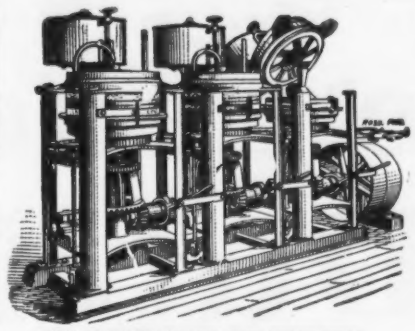

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facturers quoted $19 and upward for brown and $16 and upward for red, according to quality, quantity and terms of sale.

Mixed Paints and Colors in Oil.

A general quiet dominated the market and little attention was paid to business, the trade being busily engaged in stocktaking and preparing themselves for 1904 business. Prices have undergone no change and remained steady in tone. Prospects for business during the year 1904 looks promising.

Miscellaneous.

BARYTES.—The usual holiday dullness pervaded the market throughout the past week. No transactions in a large way have been made and only small sales of a retail character have been effected. Prices remained firm, particularly for strictly fine white goods, which continue to be scarce. Prime white domestic was quoted firm at $18.50 and upward and foreign at $17.50 and upward, according to quality and terms of sale. Other grades remained quotably unchanged.

CHALK.—No large lots changed hands and trade conditions remained lifeless, as is usual toward the close of the year. Prices were quotably unchanged at $3 and upward for the standard grades. Prospects for a large business in 1904 is very promising.

CHINA CLAY.—The market was seasonably dull and there continued to be absence of trading in large parcels. The jobbing business continued to be very light and only a small hand-to-mouth business was done. Prices remained unchanged for imported at $11 and upward and domestic at $8.50 and upward, according to quality and terms of sale.

FULLER'S EARTH.—A quiet and uninteresting market has been experienced throughout the past week. No business of importance was transacted and sales in jobbing lots were light. Holders named previous prices for round lots of lump at 80c, and powdered at 85c.

PUTTY.—The movement of supplies into consumption was decidedly light and general holiday dullness pervaded the market. Manufacturers continued to name low prices on the basis of 1½c. for supplies in bulk. The competition among manufacturers bids fair to continue during the year of 1904.

TALC.—There was no disposition shown on the part of large buyers to trade in large lots until after the turn of the year. The jobbing trade was slow and sales in the aggregate were very light. Round lots of American were held at 75c. to $1.25, according to quality, quantity and terms of sale. Foreign was dull and met with a light demand, but prices remained steady at 1¾c. and upward for French and 2¼c. and upward for Italian, according to quality, quantity and terms of sale.

TERRA ALBA.—Nothing of interest transpired in this market and the business transacted during the week was of a hand-to-mouth character. Holders, however, were not anxious sellers, and prices retained their steadiness. American No. 1 was held at 65c. and upward and imported at 95c. and upward, according to quantity, quality and terms of sale.

WHITING.—The business transacted was moderate and included several parcels for delivery in 1904. Contracts for about 10,000 bbls. of assorted grades and 5,000 bbls. of commercial for delivery in 1904, in monthly shipments, have been made on the basis of 45c. for commercial, less discounts. The deliveries on outstanding orders have been light. The jobbing demand was slow and the trade in general is now busily engaged in stock taking. Prices were steady on the basis of 45c. for commercial, in lots of over 500 bbls., or 75 tons and 48c. for lots of from 100 to 500 bbls., or 15 to 75 tons, f. o. b. factory, less discounts according to terms of sale.

GLUES.

In the absence of any new developments or features of interest, a dull and lifeless market was experienced. In mostly all quarters stock taking occupied the trade's attention and general preparations for 1904 business is going on. Prices of all grades remained steady in tone and no change in the immediate future is looked for. Extra white goods were quoted at 18c. and upward and white and brown foot stock at 8c. and 11c. and upward, respectively, according to terms of sale. Other grades were steady and unchanged.

Varnish Gums.

The usual holiday dullness dominated the market and business during the week has been practically at a standstill. Cables from primary markets noted business as seasonably dull, but prices firm and tending upward, particularly for kauri grades and damar, owing to supplies not being plentiful. The shortage of supplies of kauri from No. 2 and down is beginning to make itself felt, and it is claimed that some new developments in the way of price changes may be expected in the near future. No change in quotations for the entire list have been made.

Window Glass.

The usual dullness incident to the season was apparent and no changes in general trade conditions were noticeable. Stock taking was generally adhered to and business transacted was wholly of a routine character. Prices have been nominally steady and the outcome of the completion of the organization of the window glass manufacturers, is being awaited with intense interest.

Parties desiring to be brought in contact with concerns who offer bargains in machinery are respectively referred to page 27 of this issue.

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The Elmer Glass Works, at Bridgeton, N. J., to manufacture glass. Capital, $100,000. Incorporators, Morris Davis, Edwin R. Laning, John N. Glaspell, Bridgeton, N. J.

The Manufacturers' Window Glass Company, at Camden, N. J., to dispose of glass and glassware. Capital, $1,000,000. Incorporators: I. G. Davis, N. C. McFaydon, W. L. Vance.

Lautz Brothers & Company, of Buffalo, N. Y., soaps, glycerines, chemicals. Capital, $1,000,000. Directors: F. C. M. Lautz, C. A. Lautz, O. J. Lautz and Amelia K. Lautz, all of Buffalo.

The Southern Turpentine & Paint Manufacturing Company, at Jacksonville, Fla. Capital, $30,000. Incorporators, E. E. West, D. G. MacKethan, A. H. West, N. G. Wade, all of Jacksonville.

The Buffalo Enamel & Stain Company, at Buffalo, N. Y., to manufacture varnishes, etc. Capital, $25,000. Incorporators: Frank I. Parker, Cora B. Simons, A. J. Howard, all of Buffalo, N. Y.

The Oxzyn Chemical Company, at New York City, to deal in toilet articles. Capital, $15,000. Incorporators: E. Sharum, Nora E. Sharum, New York City; Lizzie Wallace, Brooklyn, N. Y.

The Dr. Charles Company, at New York City, to manufacture drugs, toilet articles, etc. Capital, $200,000. Incorporators and directors for the first year: S. Lathrop, M. Sawyer, New York City; A. E. Dupell, Brooklyn.

The Continental Manufacturing & Distributing Company, at New York City, to deal in chemicals, etc. Capital, $120,000. Incorporators and directors for the first year: A. A. Cook, I. H. Lehman, C. V. Ware, New York City.

The Shedd Leather Company, at Augusta, Me. Capital, $100,000. President and treasurer, Frank A. Page, Quincy, Mass.; clerk, A. C. Burgess, Warren. Directors: Frank A. Page, A. C. Burgess, J. A. Dasha, Quincy, Mass.; B. B. Shedd, Waltham, Mass.

The Tripoline Manufacturing Company, at Beaumont, Texas, to manufacture scouring soap. Capital, $500,000. President, E. H. Carroll; vice-presidents; Walter Crawford, George W. Carroll; treasurer, J. L. Cunningham; secretary, Lewis H. Scurlock.

The Essex Tanning Company, at Augusta, Me. Capital, $100,000. President, B. B. Shedd, Waltham, Mass.; treasurer, F. A. Page, Quincy, Mass.; clerk, A. C. Burgess, Warren. Directors: B. B. Shedd, F. A. Page, A. C. Burgess, H. L. Rice, Quincy, Mass.

(Special Correspondence to the Reporter.)

Bill to Reduce Tax on Alcohol.

Washington, Dec. 31, 1903.

The reconvening of Congress will be promptly followed by the vigorous agitation of the joint proposition for the reduction of the present tax on distilled spirits from $1.10 to 70c. per gallon and the delivery free of internal revenue tax of denaturized alcohol for industrial purposes. Up to the present time two bills along these lines have been presented, one drafted by Representative Sherley, of Kentucky, reducing the tax to 10c. and the other by Representative Hill, of Connecticut, providing tax-free alcohol for use in industries in which the alcohol is entirely consumed on the premises and does not form a part of the finished product.

As pointed out in these dispatches at the time Mr. Hill's bill was introduced, his proposition is merely tentative and would not be satisfactory to the largest consumers of alcohol, such as the manufacturers of varnishes, lacquers, enamels, etc., in the preparation of whose products the alcohol is used as a solvent. As a substitute for the Hill bill the Committee of Manufacturers, who have charge of the movement for a lower rate of tax and for denaturized alcohol have provided a measure similar to the bill published in the editorial columns of the Reporter several months ago, but containing certain modifications, especially with respect to the denaturized agents to be employed, which have been suggested by the committee's observations of modern manufacturing processes. The principal section of the new bill, which prescribes the method of methylating grain spirits for manufacturing purposes, specifies not only wood alcohol, methylic alcohol and wood naphtha as methylating agents, but also sulphuric ether, which it has been found is not only a thoroughly efficient denaturizing agent, but renders the grain spirits especially suitable for use in the manufacture of a number of products, including smokeless powder, fulminates, etc. The first section of the amended bill provides as follows:—

"Be it enacted, etc., That distilled spirits of an alcoholic strength of not less than 160 per centum proof, as defined by Sections 32 and 49 of the Revised Statutes of the United States, may, when removed from distillery warehouses free of tax under such regulations as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, shall prescribe:—Provided, That sulphuric ether, wood alcohol, methylic alcohol, wood naphtha, or other substances approved by the Commissioner of Internal Revenue and the Secretary of the Treasury, shall be mixed with such distilled spirits so as to render the same unfit for drinking purposes, or for use as a beverage."

The bill further provides that each cask of methylated spirits shall bear a special stamp indicating that the contents have been denaturized; that any person who shall rectify or purify spirits which have been methylated shall be subject to a fine of from $500 to $5,000 and imprisonment for from six months to three years; and that methylated spirits removed free of tax from distillery warehouse shall not be stored or deposited on any premises in which the business of a distiller, rectifier, wholesale liquor dealer or retail liquor dealer is carried on, under penalties of from $200 to $1,000 fine and imprisonment from six months to two years. The original requirement of the bill that tax-free spirits shall only be delivered from distilleries of a certain minimum capacity has been eliminated in order that there shall be no discrimination in favor of large producers and against their smaller competitors.

The Committee of Manufacturers having charge of this campaign are keenly alive to the situation produced by the falling off in current national revenues as compared with expenditures and have given very careful consideration to the subject. It has been noted that the deficit created by unusually large expenditures early in the present fiscal year has been overcome, and there is now a balance on the right side of the Treasury ledgers of about $7,000,000, with a prospect that Secretary Shaw's estimated surplus of $14,000,000 for the current fiscal year will be largely exceeded. Notwithstanding this improvement in the condition of the Treasury, it is recognized that it would be difficult to secure the enactment of the proposed legislation if it promised to reduce materially the receipts from the tax on distilled spirits. This the committee do not believe and, with a view to demonstrating the probable effect of this legislation upon the revenue, they have prepared an interesting statement in part as follows:—

Denaturized alcohol is not a substitute for pure grain alcohol, and as practically all the grain alcohol now consumed in the arts in the United States is for purposes in which pure grain alcohol is necessary—except as far as it is being gradually replaced by superrefined wood alcohol—tax-free denaturized alcohol could only affect present conditions by replacing untaxed substitutes. Its free use in the arts tax-free would have no effect whatever on the revenues.

"The only objection to denaturized alcohol worthy of consideration is that of the treasury officials, who fear that the alcohol could be profitably separated from denaturizing material and sold for beverage purposes. There is perhaps a basis for this belief when the possible danger from fraud is viewed from the standpoint of the present high rate of $1.10 per proof gallon, which is equivalent to a tax of $2.09 on a wine gallon of commercial alcohol.

"A reduction of the tax to 70 cents per proof gallon would be equivalent to a reduction of 75 cents per wine gallon of commercial alcohol, and would remove the temptation to perpetrate fraud by making it unprofitable to purify denaturized spirits, because the separation of the denaturizing substances from the alcohol would require a complicated process which would cost nearly as much as the illicit product could be sold for. The profit would be too small to compensate for the danger of detection.

"The experience of Germany where, under a low tax rate, untaxed denaturized alcohol has been in common use for many years without disclosing any fraudulent practice, furnishes a conclusive answer to the conjectured danger that frauds would be extensively practiced in the United States under a free denaturized alcohol law if the tax was lowered. If it is supposed that the German Government has superior facilities for the detection and punishment of fraud by reason of its governmental system, we find nothing in the method of administering such laws more rigid, far reaching or effective than is practicable in the United States.

"The objection is made that the proposed reduction in the tax rate would mean decreased revenues for the government. This is a mistake. The experiences, both of this country and of other nations which derive revenue from a tax on distilled spirits, conclusively shows that a tax of 70 cents per proof gallon will yield larger revenues than a much higher tax. This is due to two reasons: First, that an unduly high tax rate encourages illicit distilling, which all the resources of the government are powerless to suppress; and, second, that the increased cost of distilled spirits under the high tax rate greatly limits their consumption in the industries and arts by forcing manufacturers to use untaxed substitutes.

"The official statistics of the consumption of distilled spirits for all purposes in the United States during the past thirty years show that an increase in the tax rate results in decreased consumption in proportion to the population of the country. While the total number of gallons on which the tax is annually paid has increased along with the great increase in population, the per capita consumption was less in 1902 than in 1871.

"How much of this decrease in the consumption of tax-paid distilled spirits is due to the illicit distilling which is encouraged by a high tax rate it is impossible to fix accurately, but it is known that the increase in the amount of unlawfully distilled spirits which has followed each advance in the tax rate has been very large. The Commissioner of Internal Revenue (page 114, Annual Report, 1897), in a special communication to the Secretary of the Treasury in April, 1897, after the increased tax imposed by the Revenue Act of 1894 had been in force long enough to test its operation, stated that:—

"'Since the passage of the act referred to the number of illicit distilleries and of registered distilleries operated illicitly had increased from 1,016 to 1,905 (an increase of nearly 90 per cent.). The number of arrests for violation of the Internal Revenue Laws has increased from 614 to 839 (an increase of nearly 40 per cent.). * * * Information has reached this office showing that illicit distillation is extending in sections of the country where it has never before existed.'

"The statement was followed with a table showing that increases in the tax rate during the period beginning with the year 1864 had invariably been followed by decreased per capita consumption, and the Commissioner's conclusion was that:—'This table would indicate that the highest revenue-producing rate of 70 cents per gallon.'

"This testimony of a Commissioner of Internal Revenue who had had practical experience both under a low and high tax rate, agrees with the common sense proposition that the higher the tax, and, therefore, the selling price of the taxed material, the greater the inducement to defraud the revenue by manufacturing and selling an illicit product. In all sections of the country illicit stills are constantly at work, and only a small percentage of these stills are discovered by the revenue officers. Col. Frank G. Thompson, special internal revenue agent in charge of the district that includes New York city, Long Island and the northern half of New Jersey, stated in a recent interview that there were probably more illicit stills in New York city than anywhere else in the country. Only a few weeks ago an illicit plant capable of distilling 750 gallons of high proof spirits per day was discovered in a large factory building in East 20th street in that city. A considerable portion of spirits of the cheaper sort sold at retail is undoubtedly the product of illicit distilleries.

"The illicit distillers are enabled to conduct their operations because the high rate of tax, of $1.10, leaves a large margin of profit over the cost of their product. With a tax rate of only 70 cents per gallon the margin of profit would not be large enough to induce these moonshiners to evade the law, and they would be permanently driven out of business.

"All alcohol not intended for beverage purposes should be untaxed, and the only justification the Government has for taxing it is that it is impracticable to allow its use tax free. That it is impracticable without being made undrinkable by denaturisation is conceded. Free alcohol in a potable form for use in medicinal bitters, flavoring extracts, tinctures, medicines, perfumes, liniments, etc., would not only present problems in administration which our Government would find almost impossible to solve, but many of such articles would be substituted for taxed alcoholic beverages. There are thousands of preparations containing alcohol in a potable form which, if used by the consumer as intended by the manufacturer, would, on economic grounds, be entitled to freedom from tax, but if manufactured with free alcohol these preparations, being reduced in price to a free alcohol basis, would be substituted for taxed alcoholic beverages. The only way to benefit the consumer of such preparations, and to insure their use as intended by the compounder and the Government, is to reduce the tax."

Members of the Ways and Means Committee are showing a deep interest in the problem of giving the manfacturers of the country the benefits of tax-free alcohol enjoyed by the leading countries of Europe, and the fact that a foreign outlet is now being demanded by many important lines of industry has emphasized the necessity of putting our manufacturers on an equality with their rivals in the markets of the world. The feeling is strong that the height of the recent tide of prosperity has been reached and that special efforts will be necessary in the future to maintain the present volume of output without heavily overstocking the home market. Chairman Payne, especially, is showing a very lively interest in the subject and has given numerous assurances to his colleagues of his intention to do everything in his power to advance this movement.

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ST. LOUIS, PHILADELPHIA. CLEVELAND, PORTLAND, ORE., MINNEAPOLIS, RICHMOND, BALTIMORE, TOLEDO SAN FRANCISCO, BOSTON, BUFFALO, DETROIT.

SPENCER KELLOGG,

Independent Crusher,

LINSEED OIL,

BUFFALO, NEW YORK.

OUTPUT—300,000 Barrels Linseed Oil, 100,000 Tons Oil Cake.

CAPACITY—6,000,000 Bushels Flaxseed.

Florida Cotton Oil Co.

(REFINING DEPARTMENT)

Manufacturers and Refiners of

COTTONSEED OIL

HOMESTEAD," Prime Summer Yellow—"DAIRY QUEEN," Butter Oil—"PURITY," Cooking Oil—Yellow and White Miners' Oil.

SUMMER WHITE and SUMMER YELLOW OIL.

FULLING and SCOURING SOAP.

REFINERY and MILLS: Jacksonville, Fla., U. S. A. || SALES OFFICE: Chattanooga, Tenn., U. S. A

GLOBE REFINERY CO.

Louisville, Ky., U. S. A.

REFINERS OF

COTTON SEED OIL.

Winter White. Winter Yellow. Summer White. Summer Yellow Salad. Cooking Oil. Soap Stock. Fulling and Scouring Soap.

CHURN BUTTER OIL.

[TANK CARS FREE.]

Cable Address, - - - - "Globe," Louisville.

J. J. CAFFREY, *President*, formerly Secretary Kentucky Refining Co.
CHAS. P. FINK, *Secretary and Treasurer.*

Louisville Cotton Oil Co.,

Refiners of

ALL GRADES of COTTON SEED OIL.

SPECIALTIES:

"Louisville" Butter Oil. "Progress" Butter Oil.
"Progress" Cooking Oil. "Royal" Prime Summer Yellow.
YELLOW and WHITE MINERS' and SOAPMAKERS' OILS.
"Ideal" Prime Summer White for Compound Lard.
"Louisville" Star Soap.

Office and Refinery: Floyd & K Streets. P. O. Station E.
Cable Address: "Cottonoil," Louisville.

LONG DISTANCE TELEPHONE

Tank Cars Free for Sales or Purchasers.
Codes Used: Private, Twentieth Century, and A. B. C., Fourth Edition.

LOUISVILLE, KY., U. S. A.

OIL MARKET.

NOTE.—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on page 30.

Saturday Evening, Jan. 2, 1904.

Vegetable Oils.

LINSEED.—Early in the week some of the Western crushers who needed storage room sold 5 cars for prompt delivery at 34c., and later 10 cars more for January up, including April, at 34½c., but with the advance in seed all futures beyond January were withdrawn, and 35@36c. was asked for January. There has been a fair jobbing demand, but nothing what it was earlier in the month, and while 35@36c. is generally named, second hands now and then sell from dock at 34c. City oil is held steady at 37@38c., but the demand is not active and confined to retail orders to meet current wants. The following is from our London correspondent:—

London, Dec. 23, 1903.

Linseed.—On reported strikes and rains in the Argentine the market considerably hardened during the week, more money being paid, especially by "shorts" for covering purposes. To-day finer weather is advised and values have eased off.

Plate.—A considerable business has been concluded—2 cargoes (steamers) having found buyers at 32s. 6d. for passage, and 32s. 4½d. for shipment prompt; 32s. 6d. has been paid for December, and 31s. 9d. for December-January shipments. To-day's value 31s. 3d. to 31s. 6d. in the latter position.

Calcutta has ruled very steady and shown very little variations in value. Closing, 35s. 9d. for steamers in near position, 35s. 6d. to 35s. 9d. November, 34s. 9d. December, 34s. 6d. December-January shipments.

Linseed Oil.—After being firm and dearer closes quiet to-day. December bbls. £17 17s. 6d.; January-April, £17 15s. rather buyers; May-August, £17 15s. sellers.

COTTONSEED.—The buying interest this week has been very slack, and it would appear as if they were beginning accumulations of the oil at some mill points, more particularly those in Texas, whence offers have been made to sell larger lots at the late outside asking price of 30c. for crude in tanks. The Southeast mills have offered rather a larger number of small lots of the crude at 30c., and by that much there is loss of tone, since some of the Southeast mills had been holding up to 30½@31c. and had sold a few days since equal to 10,000 barrels at 30@31c. But Texas had found it hard, at any time, to get over 29c. for the crude, and that is more essentially the trading price, whatever other views prevail as to an asking basis. It is believed that rather more seed is coming out in Texas. But in most other sections the recent advance to $15 per ton for the seed fails to bring about selling of it in at all a free way. There could be no conclusion other than there is a good supply of seed just now over the South, even apart from any opinions concerning the extent of the cotton crop for the season, and because the amount of seed obtained from the planters has been so materially less this season as against the quantity had for the corresponding time last year, while the cotton that has come into sight is somewhat greater than last year, that the seed must be somewhere over the South. But while the seed could be had at certain high prices, it is by no means clear that it will be extensively taken up. Indeed it would seem as if oil prices would have to be higher to justify more money for seed supplies than the prices paid at present. But the market is confronted by peculiar features, and which have been incident only to this season, and because of which the entire trade is nonplussed over the situation. On the one hand there is found a line of oil prices justified by the moderate, thus far, season's production, and on the other hand a remarkably diminished consumption as against that of last year. It is realized that if the production enlarges materially the current oil prices could not, after a while, be supported, since with the markedly lower than last year prices at arrival ports there would be no prospect of a coonsumption of cotton oil anywhere near as large as that had in the previous season. It may be said that any firm views expressed over the future prices of the cotton oil is more by those traders in it who have doubts that the oil production will be anywhere near as large a one as that had in the previous year, and because they feel that the mills will not meet prices for seed that would induce active selling of it. The compound makers at the West have bought a little of the oil this week in Texas, but no source of consumption is inclined to trade in quantities more than to meet actual needs. The comparison of consumption of the home compound makers and soapmakers is in sharp contrast to that of last year, besides there is a marked falling off in foreign buying interest, as the markets abroad can be brought to trade here only in edible oils, and in these only moderately. Essentially all of the soapmakers of Europe will have—do have—cheaper oils than cotton oil. Important European buying of the grades of cotton oil under edible qualities could be had only as there should prove a larger offering of them at easier prices as the season advances. The market misses as well the little demand—which had only latterly given a little tone to it—those from Southern investors, who, however, cling to their late takings for deliveries in the spring months. There have been sales for the week equal to 10,000 barrels crude, referred to in the Southeast at 30@31c. in tanks; 25 tanks crude, in Texas, at 29c., with up to 30c. asked; 30 tanks do. at the Southeast mills, in small lots, at 30c., and further offered at 30c. In this market sales have been 1,100 bbls. prime yellow, January delivery, at 36½c., further offered at 36½c. and 36c. bid, with spot lots at 36c. bid

The
Procter & Gamble Co.

Refiners of All Grades of

COTTONSEED OIL

White Clover Cooking Oil
Puritan Salad Oil

Marigold Cooking Oil
Aurora, Prime Summer Yellow
Boreas, Prime Winter Yellow
Sapho, Summer White "Miners"
Venus, Prime Summer White
Jersey Butter Oil

Tank Cars Free to Purchasers

Cable Address: Procter, Cincinnati, U. S. A.

Office: CINCINNATI, O.
Refinery: IVORYDALE, O.

THE AMERICAN COTTON OIL COMPANY

27 BEAVER STREET, NEW YORK CITY.

CABLE ADDRESS AMCOTOIL

COTTON SEED PRODUCTS

CHICAGO 1893.

PARIS 1900.

THE AMERICAN COTTON OIL CO. PRIME SUMMER YELLOW NEW YORK.
THE AMERICAN COTTON OIL CO. PRIME SUMMER WHITE NEW YORK.
THE UNION OIL CO. UNION BUTTER OIL NEW ORLEANS, LA.
Union Oil Co PURE SALAD Oil Providence, R.I.
THE AMERICAN COTTON OIL CO. TXL COOKING OIL NEW YORK
PLANTERS NEW ORLEANS
THE AMERICAN COTTON OIL CO. SUN BRAND NEW YORK
THE AMERICAN COTTON OIL CO. MOON NEW YORK

BUFFALO 1901.

CHARLESTON 1902.

The American Cotton Oil Company,

27 Beaver Street, New York City

Southern Cotton Oil Company.

HEAD OFFICE: 11 BROADWAY, NEW YORK.

CABLE ADDRESS. - - - - - - - - "SOCOTOILCO," NEW YORK.

Mills and Refineries in Georgia, North and South Carolina, Alabama, Tennessee, Arkansas, Louisiana and Texas.

MANUFACTURERS OF ALL COTTON SEED PRODUCTS.

THE SOUTHERN COTTON OIL CO. PRIME SUMMER YELLOW
THE SOUTHERN COTTON OIL CO. THE ACE BRAND
THE SOUTHERN COTTON OIL CO. THE KING BRAND
THE SOUTHERN COTTON OIL CO. CHOICE SUMMER YELLOW
THE SOUTHERN COTTON OIL CO. CHOICE BUTTER OIL
THE SOUTHERN COTTON OIL CO. 44 WESSON

THE SOUTHERN COTTON OIL CO. 88 WESSON
THE SOUTHERN COTTON OIL CO. CHOICE WINTER YELLOW
THE SOUTHERN COTTON OIL CO. 33 WESSON
THE SOUTHERN COTTON OIL CO. 77 WESSON

OIL CAKE and MEAL. ✱ HULLS. ✱ LINTERS. ✱ SOAP STOCK and SOAP.

REFINERS OF COTTON OIL, ALL GRADES.

MANUFACTURERS OF LARD COMPOUND.

REFINERIES LOCATED AT

Savannah, Augusta and Atlanta, Ga.; Charleston, S. C.; Charlotte, N. C.; Montgomery, Ala.; Houston, Tex.; New Orleans, La.; Memphis, Tenn., and Little Rock, Ark.

and 36½c. asked; 1,250 bbls. do. January to April deliveries, at 36¾@37c., with, for a while, 36½c. bid and 37c. asked for January to May deliveries, but at the close January, February and March offered in small lots at 36½c., with 36c. bid; 1,000 bbls. do., March, at 37c., afterward at 36½c. and 37c. quoted for May to June; 800 bbls. winter yellow at 39½@40c., and 300 bbls. white at 39@40c.

EXPORTS OF COTTONSEED OIL FROM NEW YORK, BY COUNTRIES.

	For week ending Dec. 31, 1903.	Since Sept. 1, 1903.	Same time last year.
Africa, Algiers	....	1,924	6,270
Egypt	....	100	1,579
South	25	255	276
West Coast	....	.....	50
Argentine Republic	....	1,043	415
Australia & New Z.	6	418	300
Austria	....	4,861	11,158
Belgium	50	1,045	997
Brazil	155	5,346	10,927
British Guiana	85	767	641
British West Indies	17	1,694	1,990
Central America	....	31	28
Chili	....	7	254
Cuba	14	97	97
Danish West Indies	1	29	72
Denmark	100	3,473	5,231
Dutch West Indies	....	4	.....
Ecuador	....	20	20
England	869	8,690	10,358
France	....	21,997	51,052
French Guiana	....	146	126
French West Indies	595	2,976	2,117
Germany	730	6,685	11,330
Italy	100	6,450	14,210
Japan	20	66	1
Malta	150	1,732	2,389
Mexico	1	28	63
Morocco	....	50	12
Netherlands	....	3,340	7,550
Newfoundland	....	235	60
Norway & Sweden	50	2,134	970
Nova Scotia	....	.....	62
Peru	....	10	66
Porto Rico	8	161	121
Roumania	....	.....	280
San Domingo	....	865	882
Scotland	75	1,136	1,400
Spain	....	3	.....
Turkey	....	75	490
U. S. Colombia	8	338	365
Uruguay	....	1,609	1 288
Venezuela	....	42	21
Totals, bbls.	3,049	79,842	145,518

EXPORTS OF COTTONSEED OIL FROM NEW ORLEANS, BY COUNTRIES.

	For week ending Dec. 31, 1903.	Since Sept. 1, 1903.	Same time last year.
Austria	....	5,476	11,672
Belgium	....	550	1,683
Cuba	35	495	560
Denmark	....	1,501	1,795
England	....	2,045	8,060
France	....	9,600	11,913
Germany	....	4,855	1,740
Ireland	....	.....	575
Italy	....	110	200
Mexico	76	300	300
Netherlands	....	16,200	16,350
Scotland	....	244	2,100
U. S. Colombia	....	21	.....
Totals, bbls.	111	41,397	56,878

EXPORTS OF COTTONSEED OIL FROM BALTIMORE, BY COUNTRIES.

	For week ending Dec. 31, 1903.	Since Sept. 1, 1903.	Same time last year.
Belgium	....	.....	495
England	250	250	535
France	....	100	.....
Germany	....	550	967
Ireland	....	.....	150
Netherlands	500	1,300	9,809
Scotland	100	300	250
Totals, bbls.	850	2,500	12,206

EXPORTS OF COTTONSEED OIL FROM NEWPORT NEWS, BY COUNTRIES

	For week ending Dec. 31, 1903.	Since Sept. 1, 1903.	Same time last year.
Belgium	....	.....	759
England	....	939	2,085
Germany	....	6,713	15,998
Netherlands	....	1,054	21,702
Scotland	....	83	227
Totals, bbls.	....	8,789	40,771

EXPORTS OF COTTONSEED OIL FROM GALVESTON, BY COUNTRIES.

	For week ending Dec. 31, 1903.	Since Sept. 1, 1903.	Same time last year.
Austria	2,200	4.483	2,350
Denmark	....	.....	1,674
England	....	.....	.....
France	....	5,911	.....
Germany	....	2,412	1,600
Ireland	....	160	.....
Mexico	....	5,673	.....
Netherlands	3,975	19,664	21,190
Totals, bbls.	6,175	38,303	26,814

TOTAL EXPORTS AT PRINCIPAL PORTS.

From—	For week ending Dec. 31, 1903.	Since Sept. 1, 1903.	Same time last year.
New York	3,049	79,842	145,518
New Orleans	111	41,397	56,878
Baltimore	850	2,500	12,206
Newport News	....	8,789	40,771
Galveston	6,175	38,303	26,814
Totals, bbls.	10,185	170,831	282,187

The following are the official returns of the exports of cottonseed oil, in gallons, during the months of October, 1903 and 1902, furnished by the Bureau of Statistics, Washington:—

	1903.	1902.
Baltimore	.....	148,500
Boston	.....	512
Champlain	5,475	3,088
Corpus Christi	21,000	20,130
Detroit	7,212	43,433
Galveston	315,122	559,051
Huron	18,560	21,298
Memphremagog	60	.....
Mobile	5,511	4,749
New Orleans	427,035	865,537
Newport News	15,600	453,356
New York	625,207	1,525,329
Norfolk & P.	28,600	.....
N. & S. Dakota	.....	417
Pensacola	.....	13,900
Philadelphia	.....	14,300
Providence	.....	600
Saluria	129,736	373,901
San Francisco	330	169
Savannah	.....	41,720
Vermont	2,091	852
Totals, gallons	1,572,948	4,091,322

TOTAL MONTHLY STATEMENT.

	1900.	1901.	1902.	1903.
Jan.	7,100,740	6,089,587	3,533,840	4,252,774
Feb.	4,185,033	6,280,992	2,201,340	2,908.176
March.	4,133,088	5,251,955	2,272,824	3,025,721
April	3,056,532	4,994,895	2,255,276	2,033,906
May	3,012,760	3,991,528	2,775,577	2,109,348
June	2,041,088	2,339,703	1,761,837	1,283.174
July	1,289,595	1,852,602	1,876,842	845,567
Aug.	3,154,303	1,843,434	1,626,269	1,187,814
Sept.	2,202,682	1,535,701	2,725,093	1,267,153
Oct.	2,805,504	3,837,162	4,091,322	1,572,948
Nov.	4,788,607	4,371,917	4,696,001	.....
Dec.	6,168,279	4,795,760	5,063,169	.....
Totals.	44,538,756	47,005,231	34,870,017	.....
Average	3,711,563	3,917,103	2,905,835	2,048,604

(Special Cablegram to the Reporter.)

Rotterdam Cotton Oil Market.

Rotterdam, Dec. 31, 1903.

There is scarcely any demand. Butter oil, winter months' shipment, 30 florins; prime summer yellow, winter months' shipment, 28 florins per 100 kilos, c. i. f. Rotterdam.

(Special Telegram to the Reporter.)

Atlanta Cotton Oil Market.

Atlanta, Jan. 2, 1904.

Trading during the week has been inactive, 30c. being freely bid, with few acceptances; Stock of prompt oil on hand at crude mills is small and little desire shown by them to sell at prevailing prices for future delivery. Suggestions of 31c. made by buyers for round lots January shipment. Meal strong at $23.75 Charleston and Savannah.

(Special Telegram to the Reporter.)

New Orleans Cotton Oil Market.

New Orleans, Jan. 2, 1904.

Holiday trading light; crude shade easier; 30c. Valley, 29@29½c. Texas. Mills will not sell freely, either on decline or advance, expecting ultimately demand better, with surplus account greatly reduced crush. Demand for refined, nominal supply. Cake and meal less than demand: firm at $25 long ton shipside. Meal tending higher.

Cocoanut Oil, Etc.

CEYLON.—The firm tone of the market noted in our last issue has been further strengthened, with the sales of several hundred tons for January, February and early March shipment at 5⅜c. up to near 5½c. for consumption in the West. There have been limited sales of spot oil, which is not overplentiful at 5¾@6c., but chiefly at the latter price. For January arrival 5¾c. is named, and for January-March shipment 5½c. is named, with tendency to a higher range of values. There have been sales of 50 tons per month of copra for January and February shipment at 5½c. for consumption in the West.

COCHIN.—There has been another arrival to add to the already large stocks of this article. There are some who are talking low prices, but usually they are buyers provided prices come their way. There is not much demand from consumers, as they are well-stocked for the present. Bids of 5⅝c. was declined for 150 tons, with 5¾c. named for round lots and 6c. for jobbing parcels. We discuss the situation editorially in this issue.

CORN.—There is more demand from the soap trade for January-February delivery with sales of several cars at 3.80c. While further business could be done, makers are not pushing sales, as it is intimated a further rise in values may occur after the new year opens. Second hand parcels have about all been cleaned up, at 3.70c. for two cars. Jobbing parcels are quoted at 4c. and up.

PALM.—There has been a sale of 20 tons red oil on the spot by one of the soap makers, who had surplus stocks, at 5¾c. and 25 tons for January arrival at 5⅝c. Lagos is scarce and held firm at 6½@6¾c., as to quantity and seller.

MUSTARD.—The market is a shade firmer with less pressure to sell below 48c. for jobbing parcels.

OLIVE.—There is no change in the situation, which is not only dull, but prices are easier for round lots for January to June shipments, at 47@48c. for prime yellow grades. Only a small jobbing demand for spot lots at 52@53c., and for green at 55@56c., as to quality. Olive foots, on the spot, for a choice grade 5¾c. is named, with sales of 50 bbls. off grades at 5½c. For prompt shipment, 5¼c., and for all January, 5 3-16c., and the same price is asked for shipment up to June.

RAPE.—The usual jobbing demand to cover current wants is reported for spot parcels at 61@62c. for choice grades and 59@60c. for blown and 58@59c. for refined, as to quantity and seller.

Animal and Fish Oils.

COD.—A quiet and featureless market was experienced. Trading in round lots was practically at a standstill, and business of a hand-to-mouth character was carried on. Prices, however, remained firm, and for round lots of Newfoundland delivered, duty paid, to New York, first hands asked 40c. Domestic was held at 39c. For small jobbing parcels, dealers named 2@3c. above prices named for round lots.

DEGRAS.—No large contracts for future delivery have been effected, and the usual holiday dullness pervaded the market. Prices held steady, and for large lots of German 2½c. was asked, while small jobbing parcels brought ⅛@¼c. more. Prices of the other grades remained steady and without change. Nothing of interest was heard of by cable from primary markets.

LARD OIL.—Trading in large lots lacked animation, and no sales of importance have been effected. Manufacturers named previous prices of 58@59c. for prime oil. Extra No. 1 was held at 48c., and No. 1 at 40c. The jobbing demand has been slow, and dealers obtained 59@60c. for small parcels of prime winter oil. No renewal of activity is looked for until after the middle of this month.

MENHADEN. — No large sales of crude oil could be traced, and in the absence of offerings trade has been dull. A lot of 700 bbls. of crude menhaden oil was shipped from Baltimore to Glasgow. The movement in jobbing lots of manufactured grades was fair, and only small parcels were purchased to fill current wants. Prices rested on a firm basis, and no changes in quotations have been made.

NEATSFOOT.—The demand continued slow, and trading in a large way has been practically at a standstill. This, however, had no special influence on prices, which were firmly held, and for round lots of prime 54c. was asked. Sales of cold test oils included several lots of 30 deg., at 98c., sold to the home trade. In the other grades no price changes have been effected, and the undertone remained steady.

RED.—In response to the continued strength to prices of tallow, a firm tone dominated the market for saponified oil. Manufacturers offered only small parcels, for which 5c. was asked. Holders were still inclined to hold aloof, in the anticipation of a further rise in prices. The jobbing demand was slow, and dealers named 5¼c. Elaine was quiet at 44c.

TALLOW OIL.—The market was firmer, in sympathy with the advancing tendency to prices of tallow. No large sales were made by manufacturers, and a general quiet pervaded the market. Trading in jobbing lots was confined mostly to small parcels of prime oil, which were sold to the home trade at 50c. Acidless was quoted steady at 52c.

WHALE AND SPERM. — Advices from New Bedford note a very quiet market there for crude sperm oil, and that no sales have been made. The stock of crude sperm oil at that point was 1,020 bbls. on Dec. 28, and of crude whale oil supplies continued to be nil. In the manufactured grades the movement in the local market was slow, and only small parcels were traded in. First hands named 65c. for natural sperm winter, and 67c. for bleached winter. For round lots of natural winter whale 46c. was asked. Jobbing lots were held at 2@3c. above prices named for large lots.

Mineral Oils.

The movement of supplies on outstanding contracts continued to be good, and new orders placed by manufacturers amounted to a fairly good volume. The tone to prices has been decidedly firm, in sympathy with the continued strength to prices of crude oil. No change is looked for until the early part of next month, when it is expected prices will be advanced.

Oil Cake, Meal, Etc.

There have been several sales of linseed cake for prompt to cover export orders at $22.25, but no demand for later months, which are nominal at $22. Our telegrams give cotton cake and meal more in detail.

Wax, Lard, Tallow, Etc.

PARAFFINE WAX.—The movement in parcels of refined has been steady, and the call was confined chiefly to small lots, which went into direct consumption. The undertone to prices continued to be strong, in sympathy with the raw material. Manufacturers were firm in their views on prices, and named on the basis of 6½@6¾c. for refined, 120 melting point, according to terms of sale. Crude was strong at 5@6c., according to quality, quantity and terms of sale. The exports of paraffine wax from New York for the past week amounted to 2,047,698 lbs., against 1,557,778 lbs. the preceding week.

TALLOW.—Local buyers took 200 hhds. of city late in the week at 5⅛c. Now asking 5¼c.; bids of 5⅜c. have been turned down for several round lots of tcs., while prime country is offered rather more freely at 5⅜c. City melters are all sold up for January.

GREASES.—While the market is not so strong as tallow, the demand is sufficient to take up stocks at old prices, with house selling at 4½@4⅝c. and light bone at 4¾@4⅞c. and yellow at 4½c.

OLEO STEARINE.—The market is firmer, with tendency upward. Sales are reported of 50,000 lbs. here and 400,000 lbs. in the West at 6½c. Now asking 7c., with 6¾c. bid.

The Price of Lard at Chicago.

Dec.	Cash.	January.	May.
26	—@—	—@—	—@—
28	6.70 @6.75	6.70 @6.77½	6.90 @7.00
29	6.65 @6.67½	6.62½@6.70	6.80 @6.92½
30	6.67½@6.72½	6.60 @6.72½	6.80 @6.95
31	6.72½@6.75	6.72½@6.87½	6.72½@6.87½
1	—@—	—@—	—@—

(Special Correspondence to the Reporter.)

Drawback on Petroleum Barrel Hoops.

Washington, Dec. 31, 1903.

The Treasury Department has prepared a series of regulations upon the application of the Standard Oil Company for drawback of duty paid on imported steel billets used in the manufacture of steel hoops for barrels intended to contain oil designed for export. An interesting feature of the regulations is the fact that the importation of the billets by another corporation and their manufacture into steel hoops is permited, the drawback being paid to the Standard Oil Company on the exportation of the barrels filled with oil. The regulations are as follows:—

"On the exportation of barrels manufactured by the Standard Oil Company, at Bayonne, N. J., with the use of steel hoops made for and on their account by the Sharon Steel Hoop Company, of Sharon, Pa., wholly from imported steel billets, a drawback will be allowed equal in amount to the duties paid on the imported material so used, less the legal deduction of 1 per cent.

"The preliminary entry must show the marks and numbers of the shipping barrels, the number of barrels, and the total number of each kind and size of hoops contained in the entire shipment.

"The drawback entry must show the total number of barrels exported, the total number of hoops of each size contained therein, and, in addition to the usual averments, that the barrels were manufactured of the material and in the manner set forth in the manufacturer's sworn statement on file at your port.

"The entry must be accompanied by a sworn statement, which may be officially verified before liquidation of the entries by comparison with the books and records of the manufactures, showing the amount of imported steel on hand after the manufacture of the hoops covered by the preceding entry, the amount imported since the preceding shipment, with reference to the date, port, and invoice number of each importation, the amount used in the manufacture of the hoops covered by the accompanying entry, the amount remaining on hand after the manufacture of the hoops covered by said accompanying entry, and the amount of valuable waste resulting therefrom, with the current values at the works of the imported stel and valuable waste aforesaid.

"In liquidation, the quantity of imported steel billets which may be taken as a basis for allowance of drawback may equal the quantity declared in the entry, after official verification of exported quantities. An allowance may be made for valuable waste proportional to the depreciation in value of the imported material producing such waste, as shown by the current values thereof."

TRADE ITEMS.

Edward I. Lowell and John H. Newman, representatives of Magnus & Lauer in the South and West, respectively, have been spending the holiday week in this city.

The co-partnership of Powers & Weightman was dissolved by the death of Robert J. C. Walker. Mr. A. M. Walker has been admitted as a member of the firm, taking effect on the 1st inst.

The following guests were registered at the Drug Club last week:—H. C. Rennick, Philadelphia; Dr. Bowers, Pittsburgh; V. A. Bradbury, Evanston, Wyoming; Charles E. Dodd, Albany; J. E. Rogers, Burlington, and Joseph Litster, Rochester.

Advices from Pittsburgh note that the flint glass manufacturers have reached a decision whereby all bottle factories will be closed for four weeks, in order to curtail the production and to maintain prices. It was said that the shutdown of plants was effected on January 1. The Independent flint glass manufacturers will continue to operate. The closing of the factories throws out several thousand workmen.

NAVAL STORES.

NOTE.—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on page 30.

Saturday Evening, Jan. 2, 1904.

SPIRITS OF TURPENTINE.—General holiday dullness pervaded the market and trading in large lots has been practically at a standstill. Prices, however, remained steady and without any important changes, in sympathy with the firm, unchanged cables from the South. There has been no special desire shown on the part of large holders to urge sales, but offerings of supplies of machine-made barrels in yard were made at ¼c. lower to 59¾c. and oil barrels at 59¼c., resulting in small sales, including a lot of 200 barrels of machines, in yard, at 59¾c. Transactions in jobbing lots were of a retail character. The Savannah market has been steady during the past week at 56@56¼c. bid, based on the steady absorption of all offerings at that point, by certain strong interests who are contemplating holding prices on a firm basis.

ROSIN.—There has been a general lull in the market and the usual holiday dullness has been quite pronounced. The lower grades remained firm and without quotable change, except strained, common and good grades, which were placed on offer at $2.52½ for supplies, in yard, resulting in sales of several parcels of 200 bbls. at $2.52½, showing a decline for the week of 2½c. Prices of parcels of graded D and E remained unchanged. Owing to the light supply of the common grades offerings have been moderate. The stock of F, G and H grades continued to be plentiful and parcels of K, in yard, were freely offered at $3.50. Sales of some 600 bbls. were made by second hands early in the week at about $3.80@4. Prices of graded M have been raised to $4.10, owing to a better request and limited supplies. Sales of parcels, in yard, included 150 bbls. at $4.05. All grades of pale rosin continued to be extremely scarce, and prices were quoted entirely nominal. Owing to the indifference among buyers and sellers business was held in check. Sales by second hands included some 100 bbls. of window glass, in yard, at $4.50, and water white, in yard, at $4.75. There has been some talk to the effect that the pale rosin held back in the woods in the South by producers is of a fairly large quantity, but on the other hand, nothing of a definite character is known here as to what the approximate quantity really is.

TAR AND PITCH.—A dull and listless market for tar was experienced. Trade continued to drag and no sales of importance have been effected. Prices were quoted entirely nominal and supplies of oil barrels, in yard, were held at $4.50, finding few buyers. The jobbing trade bought sparingly. A sale of 50 bbls. of oil, in yard, was made at $4.50. In pitch the movement was decidedly light and confined to small jobbing parcels, in yard, which brought $2.25. A sale by first hands included 50 bbls., in yard at $2.20. No news of interest has been received from the South.

Receipts and deliveries of naval stores for week ending Dec. 31, 1903, were as follows:—

	Rosin.	Spts. Turpentine.	Tar.
Stock in yard Dec. 24, 1903.	25,293	1,270	1,677
Receipts	5,686	366	214
Deliveries	1,920	972	17
Stock in yard Dec. 31, 1903.	29,059	664	1,874

STOCKS ON HAND.

	Spirits, bbls.	Rosin, bbls.	Tar, bbls.
New York, Dec. 31....	664	29,059	1,874
New York, Dec. 31....	599	28,485	1,713
Wilmington, Dec. 28...	875	21,504	9,179
Savannah, Dec. 29.....14,628		78,539	....

Charleston, S. C., Dec. 31.

Turpentine steady, 55¾c. Rosin sales, none. Quote:—A, B, C, D, E, F, $2.15; G, $2.20; H, $2.30; I, $2.50; K, $2.75; M, $2.85; N, $3; WG, $3.20; WW, $3.45.

New Orleans, Dec. 31.

Receipts of rosin, 81; turpentine, 19. Exports to Manchester of rosin, 75.

Savannah, Dec. 31.

Turpentine firm, 56¼c.; receipts, 308; sales, 150; exports, 680. Rosin firm; sales, 934; receipts, 1,825; exports, 1,614. Quote:—A, B, C, D, E, F, $2.25; G, $2.30; H, $2.40; I, $2.60; K, $2.85; M, $2.95; N, $3.10; WG, $3.30; WW, $3.55.

Wilmington, N. C., Dec. 31.

Spirits turpentine firm, 55c.; receipts, 10 casks. Rosin firm, $2.10; receipts, 97. Tar firm, $1.60; receipts, 152. Crude turpentine firm, $2.25, $2.80 and $2.80; receipts, 32.

Liverpool, Dec. 31.

Spirits turpentine steady, 43s. 9d. Rosin, common, firm, 7s. 3d.

London, Dec. 31.

Spirits turpentine, 43s. 10½d. Rosin, American strained, 7s. 3d.; fine, 11s. 6d.

Receipts and deliveries of naval stores for December, 1903, were as follows:—

	Rosin.	Spts. of Turp.	Tar.
Stock in yard Nov. 30, 1903.	22,248	1,341	1,776
Receipts during month:—			
Brunswick, Ga.	909	14	....
Savannah, Ga.	536	50	62
Wilmington, N. C.	1,409	779	180
Georgetown, S. C.	4,407	497	310
Charleston, S. C.	550	....	....
Jacksonville, Fla.	14,128	1,331	....
Old Dominion Line.	1,406	202	254
Gulf ports.	400	....	....
Totals	23,745	2,873	806
Deliveries during month....	16,932	3,550	708
Stock in yard Dec. 31, 1903.	29,059	664	1,874

The weekly statistical position of spirits of turpentine in barrels, in London, for each year, from 1900 to 1903, was as follows:—

	1903.	1902.	1901.	1900.
Stock Dec. 19.	20,522a	26,750	33,778	22,977
Del'd this week...	986b	1,241	1,005	1,006
Since Jan. 1.	86,120	86,979	86,121	83,096
	s. d.	s. d.	s. d.	s. d.
Price Dec. 21.	43 10½	39 3	27 3	28 10½
Feb.-April	44 1½	39 9	27 10½	29 6

(a) Includes 784 bbls. French.
(b) Includes 25 bbls. French.

The firm of Vanhorne, Griffen & Co. expired by limitation with the close of the year, and a new firm under the name of D. A. Vanhorne & Co. has been formed to continue the business. The members of the new firm are D. A. Vanhorne, D. A. Vanhorne, Jr., Leonard Vanhorne. Mr. Benjamin Griffen will continue in the glass business.

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Exact and rapid chemist wanted. State age, experience and salary desired. Address S. E. O., care of this paper.

Proposals will be received at the Bureau of Supplies and Accounts Navy Department, Washington, D. C., until 12 o'clock noon, January 5, 1904, and publicly opened immediately thereafter, to furnish at the navy yards, League Island, Pa., Washington, D. C., and the U. S. Naval Academy, Annapolis, Md., a quantity of corn brooms, paving brick, ash, cherry, mahogany, oak, pine piles, steel forgings, red lead, lard oil, turpentine, emery and crocus cloth, cotton waste, brass tubing, lithographic posters, and cleaning and repairing sextants. Blank proposals will be furnished upon application to the Navy Pay Offices, Philadelphia, Pa., Baltimore, Md., and the Bureau of Supplies and Accounts, Navy Department, Washington, D. C. H. T. B. HARRIS, Paymaster General U. S. N. 12-14-03.

PROPOSALS

Will be received at the Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 12 o'clock noon, January 12, 1904, and publicly opened immediately thereafter, to furnish at the Navy Yard, New York, N. Y., a quantity of projectors and accessories, lighting wire, bolts and nuts, rivets, scrub brushes, mattress covers, unbleached cotton socks, sewing silk, linoleum, oak boat knees, steel plates, steel bars and shapes, magnesia pipe covering, pneumatic hose and fittings, orange gum shellac, brass tubes, pipe and fitting, steam separators and apparatus, tinned apricots, tinned bacon, rice, macaroni, salt, sugar, safes, salt water soap, and furnishing and installing automatic vacuum pumps. Blank proposals will be furnished upon application to the navy pay office, New York, N. Y. H. T. B. HARRIS, Paymaster General U. S. N. 12-21-03

Nearly three hundred members and their friends had luncheon at the Drug Trade Club last Thursday. It was the annual New Year's celebration, and Scherber's Orchestra furnished music between the hours of twelve and three. The Art and Entertainment Committee had arranged to have the Old Crow Quartette render selections during the afternoon, but, owing to a misunderstanding about the date, the quartette thinking the celebration came on Friday, this part of the entertainment did not materialize.

Machinery Department.

The advertisements which appear in this department are those of Manufacturers, and they all will send catalogue and full information upon application.

It is requested that all inquirers mention the fact that the name was taken from the MACHINERY DEPARTMENT of this publication.

If any of our readers are contemplating the purchase of machinery we will be pleased to place them in direct communication with the manufacturers.

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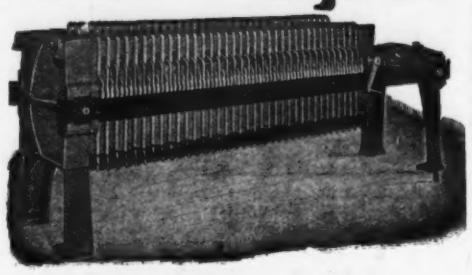

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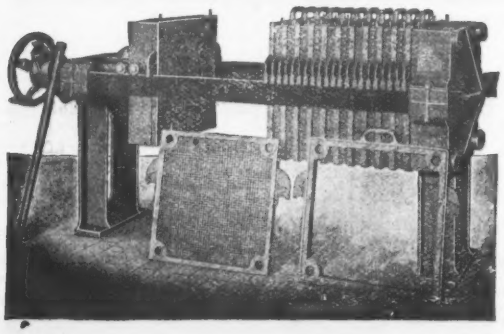

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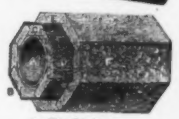

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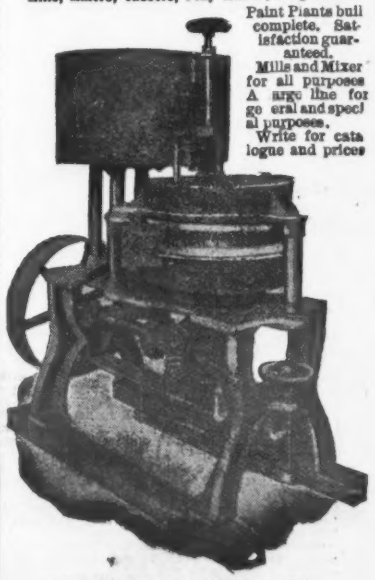

CHAS. KAESTNER & CO.,
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(Special Correspondence to the Reporter.)

The Mineral Industries.

Washington, Dec. 30, 1903.

The Census Bureau has compiled an interesting preliminary memorandum giving the returns of certain branches of the mining industry which will hereafter be made the subject of more elaborate reports. In order to avoid a duplication of the work of the United States Geological Survey, which publishes an annual statement covering the production and value of output together with certain technological details, the Census Bureau follows the plan pursued with regard to the manufacturing industries, paying chief attention to the figures reflecting the financial aspect of the subject as well as its magnitude from a purely commercial standpoint. Following are the preliminary figures for those industries of special interest to the Reporter's readers:—

Infusorial Earth, Tripoli and Pumice.—There were 11 mines and quarries in operation during the census year 1902 in this industry. There were 10 operators, the character of ownership being as follows:—Individual, 3; firm, 4; incorporated companies, 3. Additional details of the industry were as follows:—Number of salaried employes, 8; total salaries, $4,016; average number of wage earners, 35; total wages, $13,682; cost of supplies and materials, $2,297; miscellaneous expenses, $2,263; product, 6,415 short tons, valued at $35,594. This does not include 170 short tons, valued at $1,436, mined as a by-product in the production of soapstone and talc.

Marl.—There were 11 mines and quarries in this industry, conducted by 11 different operators, as follows:—Individual ownership, 9; incorporated companies, 2. Additional details were as follows:—Average number of salaried employes, 2; total sararies, $2,100; average number of wage earners, 13; total wages, $4,709; cost of supplies and materials, $2,755; miscellaneous expenses, $1,407; product, 12,439 short tons; value, $12,741.

Asbestos.—There were 4 mines and quarries in this industry conducted by 4 operators, 1 under firm ownership and 3 as incorporated companies. Additional details were as follows:—Number of salaried employes, 7; total salaries, $2,625; average number of wage earners, 24; total wages, $8,250; cost of supplies and materials, $8,233; miscellaneous expenses, $1,766; prouuct, 2,505 tons; value, $46,200.

Barytes.—There were 49 mines and quarries in this industry, with 42 operators, and with ownership as follows:—individuals, 16; firm, 17; incorporated companies, 6; limited partnership, 3. Additional Details were as follows:—Number of salaried employes, 28; total salaries, $15,150; average number of wage earners, 330; total wages, $130,285; cost of supplies and materials, $7,772; miscellaneous expenses, $35,555; product, 61,668 tons; value, $203,154.

Bauxite.—There were 38 mines and quarries in this industry with 7 operators, including 2 individuals and 5 incorporated companies. Additional details were as follows:—Number of salaried employes, 42; total salaries, $33,230; average number of wage earners, 150; total wages, $59,763; cost of supplies and materials, $4,019; miscellaneous expenses, $4,939; product, 29,222 long tons; value, $128,206.

Borax.—There were 6 mines and quarries returned in this industry with 6 operators, all of which were incorporated companies. Additional details were as follows:—Average number of salaried employes, 14; total salaries, $18,128; average number of wage earners, 153; total wages, $114,865; cost of supplies and materials, $213,538; miscellaneous expenses, $47,606; product, 19,142 short tons, valued at $2,383,614, divided as follows:—Crude, 2,600 short tons, valued at $91,000, and refined, 16,542 short tons, valued at $2,292,614.

Sulphur and Pyrite.—In the statistics for this industry the details for sulphur and pyrite are combined so as to avoid disclosing the operations of individual establishments. There were 23 mines and quarries with 18 operators, and with ownership as follows:—Individual, 1; firm, 2; incorporated companies, 14; limited partnership, 1. Additional details were as follows:—Number of salaried employes, 54; total salaries, $49,890; average number of wage earners, 970; total wages, $398,870; cost of supplies and materials, $217,262; miscellaneous expenses, $39,118; product, 207,874 long tons; value, $947,080, which includes 11,483 long tons of pyrite, valued at $39,420, mined as a by-product in the production of coal.

Crystalline Quartz.—There were 6 mines or quarries in this industry with 5 operators, including 3 individuals and 2 incorporated companies. Additional details were as follows:—Number of salaried employes, 8; total salaries, $6,030; average number of wage earners, 29; total wages, $13,592; cost of supplies and materials, $95; miscellaneous expenses, $1,950; product valued at $43,085.

Graphite.—There were 28 mines or quarries in this industry with 19 operators under the following ownership:—Individual, 3; firm, 1; incorporated companies, 15. Additional details were as follows:—Number of salaried employes, 27; total salaries, $18,924; average number of wage earners, 164; total wages, $76,728; cost of supplies and materials, $51,840; miscellaneous expenses, $6,039; product, 27,438 tons, valued at $227,508, divided as follows:—Crude, 24,276 short tons, valued at $79,900, and refined, 3,162 short tons, valued at $147,608.

Soapstone and Talc.—There were 20 mines or quarries in this industry, with 20 operators, under ownership as follows:—Individual, 4; firms, 3; incorporated companies, 13. Additional details were as follows:—Number of salaried employes, 75; total salaries, $63,715; average number of wage earners, 771; total wages, $279,083; cost of supplies and materials, $125,932; miscellaneous expenses, $30,136; product, 97,563 short tons valued at $1,138,167, exclusive of 390 short tons valued at $2,340 reported with mineral paints.

Fluorspar.—There were 22 mines or quarries in this industry, with 18 operators and the following ownership:—Individual, 2; firms, 2; incorporated companies, 14. Additional details were as follows:—Number of salaried employes, 42; total salaries, $27,311. average number of wage earners, 269; total wages, $110,002; cost of supplies and materials, $3,137; miscellaneous expenses, $23,602; product, 46,818 short tons; value, $275,682.

Asphaltum.—There were 24 mines or quarries in this industry, with 24 operators and with ownership as follows:—Individual, 3; firms, 2; incorporated companies, 19. Additional details were as follows:—Number of salaried employes, 52; total salaries, $48,233; average number of wage-earners, 156; total wages, $79,670; cost of supplies and materials, $21,928; miscellaneous expenses, $19,753; product, 66-238 tons; value, $236,728.

Crude Mineral Pigments.—There were 35 mines or quarries in this industry, with 33 operators and with the following ownership:—Individual, 8; firms, 5; incorporated companies, 20. Additional details were as follows:—Number of salaried employes, 63; total salaries, $53,598; average number of wage earners, 256; total wages, $106,087; cost of supplies and materials, $58,073; miscellaneous expenses, $24,893; product, 35,479 short tons; value, $360,885, including 18 tons valued at $525 produced by a company mining slate, and 390 tons, valued at $2,370, produced by a company mining soapstone and talc.

Phosphate Rock.—There were 115 mines or quarries in this industry, with 87 operators and with ownership as follows:—Individual, 18; firms, 12, incorporated companies, 56 and limited partnership, 1. Additional details were as follows:—Number of salaried employes, 391; total salaries, $355,204; average number of wage earners, 6,971; total wages, $1,930,093; cost of supplies and materials, $799,414; miscellaneous expenses, $430,475; product, $1,548,720 long tons; value, $4,922,943.

The preliminary returns for quicksilver and Fuller's earth lack certain items covered by the preceding statistics. They are as follows:—

Quicksilver.—There were 41 mines or quarries in this industry, with 117 salaried employes and 1,329 wage earners. The product included 34,291 flasks of quicksilver of 76½ pounds each, valued at $1,467,848, together with 11,727 short tons of cinnabar, valued at $82,242.

Fuller's Earth.—There were 4 mines in the industry, with 14 salaried employes and 114 wage earners. The product was 11,492 short tons, valued at $98,144.

Patents Granted.

Under this heading we give a resume of the patents relating to the various trades represented by the Oil, Paint and Drug Reporter, issued by the United States Patent Office. A copy of the specifications of any of these patents may be obtained by addressing Commissioner of Patents, Washington, D. C. When ordering specifications it will be necessary to give the number of the patent.

Patents Issued Dec. 22, 1903.

747,347. — PROCESS OF DESULFURIZING OILS OR DISTILLATES. Ottó P. Amend, New York, N. Y. Filed Feb. 25, 1903.

The process consists in eliminating the sulfureted hydrogen contained therein in neutralizing the fatty and organic acids contained therein by subjecting them to the action of an alkali and then drawing off or removing the excess or settled alkali; in exposing the sulfur and sulfur compounds in the oil or distillate to the action of a soluble salt of copper in the presence of an alkali, but with the copper solution in excess of the alkali thereby producing a hydrated copper in a neutral saline solution; in removing the excess of copper, the copper hydrosulfids and residuum and exposing the remaining copper and copper sulfids to the action of sulfuric acid; and in removing the acid and sludge.

747,348. — PROCESS OF DESULFURIZING OILS OR DISTILLATES. Otto P. Amend, New York, N. Y. Filed March 10, 1903.

The process consists in eliminating sulfureted hydrogen therefrom by washing, blowing with steam or air or by both steam and air; in removing fatty and organic acids contained therein by subjecting them to the action of an alkali, in removing the alkali after agitation; in agitating the oil or distillate with a soluble salt of copper in the presence of a soluble carbonate; in removing the excess of copper salts and copper hydrosulfids thus formed and subjecting the oil or distillate to the action of sulfuric acid, then removing the acid sludge.

747,402.—SELF-SEALING BOTTLE. William E. Forster, Lynn, Mass. Filed April 14, 1897.

A bottle having, in combination, a tube provided with a valve and inserted in the neck of the bottle, a guard having a perforated bottom and arranged to close the outer end of the tube, and connections between the guard and the tube arranged to permit sliding movement of the guard within the tube but to prevent the removal of the guard from the tube.

747,428.—GLASS-CUTTING MACHINE. Franz A. Hubbuch, Strassburg, Germany. Filed Dec. 16, 1902.

A machine, comprising two oscillating bell-crank levers, vertical cutting-disks carried by one arm of each of said levers, counterweighed oscillating lever-arms, devices carried by said arms for maintaining the proper distance between work and cutting-disks, flexible shafts driving said disks, a wedge-headed lever engaging between the ends of the other arms of said bell-crank lever, a cam-shaft actuating said wedge-headed lever whereby the disks may be pressed apart, a vertically reciprocating and rotating work-holder, means actuated by said cam-shaft for rotating said work-holder, and clutch mechanism for throwing the cam-shaft out of gear on completion of the work.

747,434.—OIL-BURNER. Frederick W. Jaeger, Baltimore, Md. Filed Nov. 25, 1902.

In a heating device of the class set forth, a draft-plate with a single opening through the center thereof, a closed vaporizing-burner supported above the draft-plate and having a connection with an oil-supply and a gas-chamber with bottom outlets, the connection with the oil-supply passing upwardly through the chamber and said outlets forming the sole means of escape of the gas from the heating device, an oil-distributer held within the burner at an elevation above the gas-chamber and to which the oil directly feeds, said distributor being provided with radial arms having grooves extending longitudinally thereof, and an asbestos wrapping around said means for supporting the oil-distributer, a space being formed between the outer surface of the asbestos wrapping and the adjacent wall of the burner of the heating device whereby the vaporized oil or gas is permitted to flow downwardly toward and out through the bottom outlets of the gas-chamber.

747,437. — MANUFACTURE OF GLASS PLATES OR SHEETS. William L. Kann, Pittsburgh, Pa. Filed Dec. 20, 1902.

The method of making a plate of glass having variegated effects and colors, which consists in melting a batch, and before the melting is finished introducing thereinto coloring-matter which sinks therein, continuing the melting of the batch and, when it is finished, pouring the same.

747,620.—KEROSENE-OIL ENGINE. Abbot A. Low, Horseshoe, and August Wassmann, Astoria, N. Y. Filed March 4, 1903.

The combination with an ignition or combustion chamber, of means for simultaneously introducing into said chamber, jets under pressure, of both oil and alcohol, the injectors being opposed to each other in such manner that the jets of oil and alcohol are caused to impinge against each other in said chamber.

747,629.—PROCESS OF PURIFYING PINENE HYDROCHLORID. Wilhelm Naschold, Uerdingen, Germany. Filed Oct. 16, 1902.

The process consists in treating ordinary pinene hydrochlorid with a saponifying agent in such a manner as to split up only the readily-saponified subproducts associated with the said pinene hydrochlorid.

747,643.—BLUE SULFUR DYESTUFF AND PROCESS OF MAKING SAME. Niklaus Rongger, Basle, Switzerland. Filed July 14, 1903.

The dyestuff obtained from para-oxy-para-amido-meta-methyl-diphenyl-amin, being a dark blue powder, insoluble in water and alcohol, easily soluble in cold diluted alkaline sulfids with a blue color which is changed to a slight brown on boiling, dissolved in cold strong sulfuric acid with blue color and dyeing unmordanted cotton in a bath containing alkaline sulfids blue shades fast to alkalies, washing and light.

747,826. — NON-REFILLABLE BOTTLE. Zachariah Wiseman, Redstar, W. Va. Filed May 1, 1903.

Comprising a bottle and a stopper adapted to be forced into the said bottle or receptacle, said stopper carrying means for locking it in the bottle and a valve adapted to be opened as the stopper is forced inward.

747,898.—COMPOSITION OF MATTER FOR REMOVING VARNISH, ETC. Thomas M. Stack and Walter R. Peck, New Milford, Conn. Filed April 18, 1903.

The composition of matter consisting of amyl acetate, alcohol, benzole, acetone and benzin.

747,913.—PROCESS OF MAKING SHEET-GLASS. Nicholas Harrison and Joseph Wharton, Monongahela, Pa. Filed Sept. 12, 1902.

The process consists in preliminarily spreading by its own weight and simultaneously cooling a mass of glass, then simultaneously cooling, rolling the gass to final sheet form, and carrying it forward horizontally in approximately a straight line without bending, then severing into sections by a substantially rectilinear cut normal to the sheet and finally polishing the sections at a high temperature to restore the surface transparency.

Relative Tanning Values of Different Species of Myrobolans.*

By DR. J. GORDON PARKER AND F. AUSTYN BLOCKEY.

Myrobalans is the trade name given to the dried fruit of various species of Indian Terminalia. The chief source is the Terminalia chebula, a tree forty to fifty feet high, which is valuable also for its timber. The nuts, or fruit, are about the size of a pigeon's egg, some varieties being round in shape and smooth, others more elongated and wrinkled. There are five chief varieties, called after the district from which they are obtained, the price and quality of which vary considerably, while opinions as to their actual value in the tanning trade in this country are often diametrically opposed, some tanners holding that Jubblepore myrobalans, or J's, as they are technically called, are worth more than Bhimlies, or B's, while others are equally strong in their opinion that B's are better than J's. Some tanners always purchase the higher-priced varieties, demanding that the nuts shall be of a light green color, and cut with a waxy cut, others prefer the darker, browner varieties, which are more powdery when cut; and more than one case has come before the author's notice in which a tanner has rejected a delivery as being darker in color than the sample, and, on arbitration, got an allowance in one case of over £1 a ton. Afterward the sample on which this tanner bought and the delivery on which he obtained £1 allowance were analyzed, and it was found that the myrobalans delivered were 3 per cent. stronger in tannin than the original sample, which, according to the opinion of three arbitrators, who were all practical men, was worth £1 a ton more than the delivered bulk. It was, therefore, clear that a difference of opinion existed in the trade as to the real value of the different varieties apart from their market price. An attempt to ascertain the reason for this divergence of opinion was not very successful, as myrobalans are bought by one tanner for a purpose totally different from that for which his neighbor buys a different variety, some tanners using them simply for their strength and their apparent cheapness when compared with the price of oak bark or valonia, others using them on account of their brightening color, others because of the light-colored bloom they deposit on and in the leather, while again many tanners value myrobalans on account of their power to produce liquors rich in natural acids to be used in the early stages for plumping their young goods.

The authors, therefore, undertook this investigation with the object of ascertaining, if possible, the exact qualities possessed by the different varieties. It was necessary not only to ascertain which was the strongest in tannin, but whether the tannin in each variety was of equal value, strength for strength, which variety gave the most bloom, which produced the most acid, and, lastly, and by no means the least important, to ascertain the difference in color imparted to the leather.

In order to carry out this work, Messrs. Fisher, King & Co., of London, were good enough to obtain for us eleven different samples, all of average quality, and representing the different varieties and the different qualities or brands of these varieties, and, at the same time, were able to satisfy us of the authenticity of the samples.

The first part of the work was comparatively simple, viz., the analysis of the varieties, in order to ascertain which variety or classification contained the most tannic acid, as shown by the standard method of analysis for tanning materials, and from the subjoined table (Table I) it will be noticed that B No. 1 appears to contain more tannin than any other variety, followed by J No. 1, then by R No. 1, and then by B No. 2. It is strange that the picked varieties, which are evidently picked by hand, and fetch a higher price in the market than No. 1 variety, in each case come out considerably lower in tanning strength than the No. 1's. We have ascertained that as the nuts ripen on the trees certain of these are picked off before the sun has had time to darken them in color, and then afterward, as the fruit ripens, the trees are shaken or the boughs knocked, and the fruit falls to the ground. It is then collected, and after reaching the warehouse is picked over by hand in No. 1, No. 2 and sometimes No. 3 varieties, the color being the essential point. It would appear that the color of the fruit is in no sense an indication of the tanning strength, nor does it appear to be a true indication of the color as shown by the tintometer measurements, and by the piece of leather here exhibited, tanned with the various varieties, as in each case the samples picked by hand, picked specially for their appearance, are not only weaker in tannan, but give darker solutions, the leather also being of a darker color than that tanned with the fruit which has been allowed to ripen further, and afterward knocked down to the ground.

TABLE I.

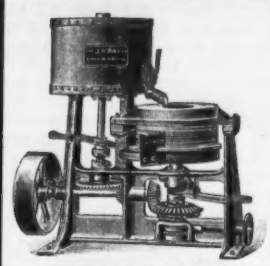
Analyses and Tintometer Readings Recalculated to 12 Per Cent. of Water.

	Tannin.	Non-Tannins.	Insoluble.	Water.	Tintometer color measurements of solution containing 0.5 per cent. of tannin measured in 1-cm. cell. Red.	Yel.	Bk.
Picked Bhimley	33.0	13.1	41.7	12.0	0.8	2.5	..
Bhimley 1	38.4	16.1	33.5	12.0	0.3	1.8	..
Bhimley 2	35.2	14.2	38.6	12.0	1.0	5.1	..
Picked Rajpore	32.2	13.0	42.8	12.0	1.1	3.0	..
Rajpore 1	35.4	12.1	40.5	12.0	0.9	4.0	0.1
Rajpore 2	27.6	12.7	47.7	12.0	2.5	7.4	..
Picked Jubblepore	28.9	12.7	46.4	12.0	0.8	2.2	..
Jubblepore 1	36.5	14.4	37.1	12.0	0.8	3.4	..
Jubblepore 2	27.3	14.1	46.6	12.0	1.3	5.9	..
Vingorlas 1	31.5	9.5	47.0	12.0	1.2	3.0	..
Fair Coast Madras	34.8	15.4	37.8	12.0	1.2	3.9	..

One of us some years ago inspected a large number of myrobalans which had been sent over by the Indian Government to the Imperial Institute, and, although the work has never been published, and we believe is not yet complete, as far as we could then ascertain, the valuable work done by the Imperial Institute showed that the longer the fruit was left on the tree, and the riper it got, the greater was the percentage of tannin present, and, although the external color of the nut was darkened in this ripening process, it had little or no effect upon the color of the liquor got from the myrobalans or upon the leather tanned with this liquor.

To ascertain as far as possible by laboratory methods whether the tannin in each variety was of equal value, or, in more technical language, whether each variety possessed the same leather-forming value, the following experiments were undertaken. By means of a small copper leaching apparatus, a quantity of strong liquor was made from each variety of myrobalans. This liquor was made of such a strength as to contain more than 5 per cent. of tannin, and after analyzing by the hide-powder filter method such a quantity was measured out into a flash, as when diluted with water to 500 c.c. would give 500 c.c. of a 5 per cent. solution of tannin. To the strong liquor thus measured out, a measured quantity of water was then added to make 350 c.c. of solution. To represent the hide, 10 grms.

*Paper read at a recent meeting of the Nottingham Section of the Society of Chemical Industry.



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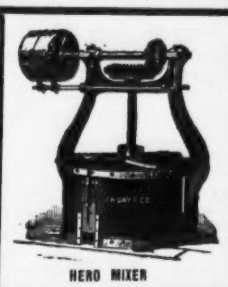

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of pure air-dry hide-powder was weighed out into a bottle of about 3 litres capacity, and 150 c.c. of water added, and the hide-powder water turned in a churning apparatus for an hour, in order to thoroughly soften the hide-powder; 50 c.c. of the 350 c.c. of myrobalan liquor was now added at intervals of half an hour until all the solution had been employed, when, as will be seen, with the 150 c.c. of water used for washing, 500 c.c. of 5 per cent. tannin solution had been employed.

On completion of the tannage the whole contents of tanned hide-powder and liquor were removed to a filter funnel plugged with cotton wool, the hide-powder adhering to the sides of the bottle being carefully rinsed on to the funnel by means of the filtered liquor, no water being used at this stage. When all the hide-powder was removed from the bottle it was allowed to drain about 24 hours, being occasionally pressed down to squeeze out liquor which it retained. The whole contents of hide-powder were now placed in a weighed basin, and the total weight of wet-tanned hide-powder noted. After thoroughly mixing, a portion was weighed out to estimate contained water, and a further portion of the wet powder was weighed out, placed in a filter funnel, plugged with cotton wool, and washed with a litre of cold-distilled water, in order to remove soluble matter not actually combined with the hide-fibres. After being allowed to drain in the funnel for 24 hours, with occasional pressing, as before, the total weight of tanned hide was again noted, and a portion weighed out for estimation of water. It was now easy to calculate from these data the actual weight of hide-powder produced under the conditions given, and the loss in washing. In the following table are given the results showing the gain in weight obtained in the tannage, starting from 10 grms. of air-dry hide-powder, which was equivalent to 8.5 grms. of dry powder, and all the calculations are made on actual dry matter.

TABLE II.

Weight-giving Properties of Myrobalans, Calculated to 100 Parts of Raw Dry Hide.

	Percentage yield of unwashed leather.	Units of weight lost on washing.	Percentage yield of washed leather.
Picked Bhimley.....	154	29	125
Bhimley 1.....	159	35	124
Bhimley 2.....	161	35	126
Picked Rajpore	137	17	120
Rajpore 1.....	145	24	121
Rajpore 2.....	146	19	127
Picked Jubblepore....	166	33	133
Jubblepore 1.....	187	32	155
Jubblepore 2.....	187	30	157
Vingorlas 1.....	144	31	113
Fair Coast Madras...	151	37	114

It will be noticed from the table that the different classes of each variety correspond fairly closely in their weight-giving properties, Jubblepores being considerably more valuable in this respect than any of the others, while the Bhimley and Rajpore varieties show little difference in the weight of leather produced after washing. It is also worthy of note that the No. 2 variety yields in every case the greatest weights, while the No. 1 quality seems usually to be better than the picked, which, as above stated, are the least ripe.

In carrying out these weight-giving determinations, it was necessary, as we have already pointed out, to make a quantity of liquor of such a strength that not more than 350 c.c. should be

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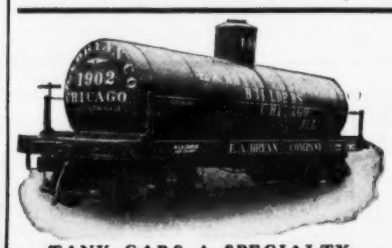

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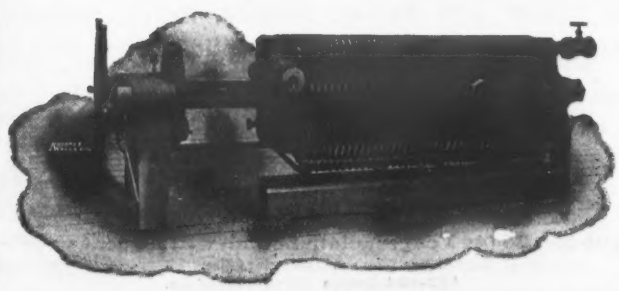

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required to dilute to 500 c. c. of a solution containing 5 per cent. of tannin. In order to judge approximately when such a strength of liquor had been obtained, we used the barkometer, a hydrometer used extensively in the leather industry for measuring the gravity, and at the same time giving a comparative idea of tannin strength. It was already well known that the readings of the barkometer were extremely liable to be misleading when used for liquors of different age and character, the presence of large quantities of non-tanning matters present in old liquors increasing the gravity, and consequently the barkometer strength, while the tannin may be very low. With liquors, however, of similar age and character, the readings of the barkometer usually correspond approximately with tanning strength; e. g., a layer liquor of 500 deg. Bk. containing 5 per cent. of tanning matter, when diluted with water to 2.5 per cent. of tanning matter, will show about 25 deg. Bk.

We have found, however, that the barkometer was very misleading as a guide to tanning strength with fresh myrobalan liquors, and Table III. gives the gravity in degrees barkometer of strong myrobalan liquors and their analyses, and it will be seen that liquors of one barkometer reading show in some cases more, and in some cases less, tannin than liquors of higher barkometer reading.

TABLE III.

Sample.	Barkometer strength of liquor. Degrees.	Percentage of tanning matter contained.
Picked Bhimley	50	7.3
Bhimley 1	49	7.1
Bhimley 2	60	9.0
Picked Rajpore	50	7.5
Rajpore 1	47	7.3
Rajpore 2	55	8.6
Picked Jubblepore	55	6.7
Jubblepore 2	70	8.1
Vingorlas 1	55	8.7
Fair Coast Madras	62	8.7

Bloom.—As has already been pointed out, one of the chief attractions of myrobalans to the sole leather tanner is their bloom-yielding capacity, and it was, therefore, a matter of some importance to try and estimate the amount of bloom deposited under tannery conditions by the eleven samples under examination. For this purpose 50 grms. of each of the finely-ground samples was placed in the beaker of a Procter tanning extractor, and very slowly extracted, gradually raising the temperature to about 60 deg. C. until a liter of strong myrab liquor was obtained. This was then in each case poured into a large beaker and allowed to stand for seven days in the laboratory. By this time very large deposits had occurred in the liquors made from the Jubblepore and Vingoria samples, while only comparatively small deposits had occurred in the liquors made from the Bhimley, Rajpore and Madras myrobalans.

In each case the contents of the beakers were now filtered, the deposit being collected on filter-paper and the liquor passing through. This clear liquor was now placed in similar beakers and allowed to stand for a further period. The deposit on the filter-paper was carefully washed with tepid water until 250 c.c. of filtrate had been obtained. This washing in tepid water removed some soluble matter, but the matter which remained was probably largely or entirely bloom (ellagic acid). In each case it was now placed in weighed basins, and dried until all the water had been driven off. The weight of dry residue thus obtained shows the amount of bloom obtained under these conditions from the eleven samples of myrobalans.

In reference to the clear liquors, these were placed on one side for a further period of 17 days, by which time a further quantity of bloom had deposited. This was filtered and treated as before, the amount of bloom deposited on standing a further 17 days being thus obtained. The results are given in Table IV., in three columns. For practical tanning purposes, the figures correspond to bloom deposited from a liquor made by extracting 100 lbs. of myrobalans in 200 gals. of water, the first column showing pounds of bloom deposited by allowing such a liquor to stand seven days; the second column showing a further deposit after the same liquor had stood an additional 17 days; and the third column the total bloom deposit in 24 days from a liquor made from 100 lbs. of myrobalans, and treated in the manner indicated.

The results show that under these comparative conditions Jubblepore and Vingoria myrobalans are distinctly superior to all the others from the amount of bloom they yield. A matter of some importance also is, that with the three Jubblepore samples and the Vingoria a large part of the bloom is deposited during the first period, while in nearly all the other cases the greater part of the bloom is deposited during the second period. It may, therefore, be said that the samples of Jubblepore and Vingoria myrobalans examined deposit their bloom very quickly.

TABLE IV.

Percentage Yield of Bloom Obtained from Strong Myrobatan Liquor After Standing.

	Seven days. Per cent.	Seventeen days. Per cent.	Total, twenty-four days. Per cent.
Picked Bhimley	0.98	1.16	2.14
Bhimley 1	1.44	1.35	2.79
Bhimley 2	1.72	2.62	4.34
Picked Rajpore	1.55	3.60	5.15
Rajpore 1	0.90	3.54	4.44
Rajpore 2	0.98	3.04	4.02
Picked Jubblepore	3.28	3.43	6.71
Jubblepore 1	6.91	2.95	9.86
Jubblepore 2	4.76	3.63	8.39
Vingorlas 1	5.15	1.68	6.83
Fair Coast Madras	1.44	3.37	4.81

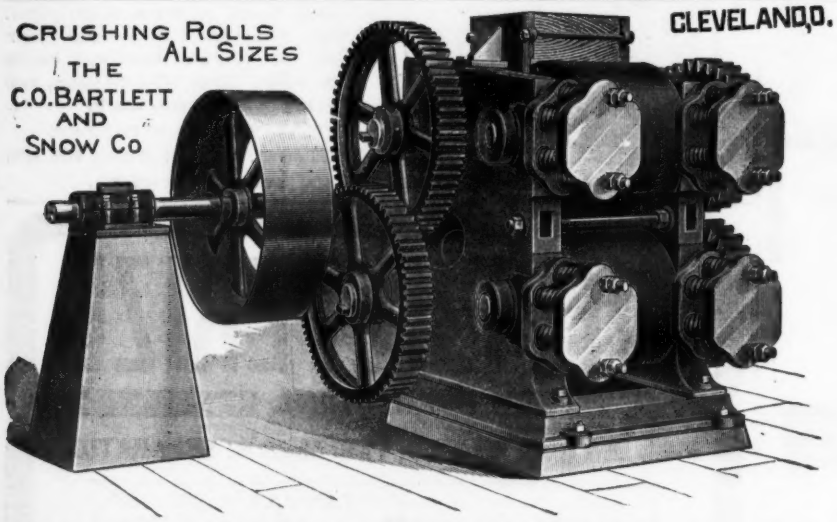
Acidity.—When hides for sole leather come from the rounding table full of lime and are suspended in weak liquors, complicated reactions take place between the acid and tannin of the liquors and the lime in the hides, and a great deal of the success of sole leather tanning depends on the correct adjustment of these, and if there is just sufficient acid to neutralize the lime carried in by the hides, they will tan and color evenly, and the fibers be swollen in proper condition for receiving the weight-giving properties of the duster and layer liquors.

In modern sole-leather tanneries, however, where large proportions of extract are used, and the leather is not kept in the pits more than, in many cases, four months at the outside, it is obvious that natural fermentation of the non-tannin bodies of the tanning materials must take place to a much more limited extent than formerly, when less extract was used, and the leather kept in the liquors much longer. From this it follows that the amount of natural acid present in modern tan-yard liquors is, in many cases, less than was formerly present, and various means are resorted to in order to increase the amount of acid in the liquors or decrease the amount of lime retained by the hides. In the latter case the use of boracic and lactic acid for surface deliming has increased enormously of late, while in the former case it is very common to add acids, such as lactic, to the early suspender liquors as a means of artificially increasing their acidity.

One of the best materials for the purpose, however, and one which is perfectly safe in its action, is myrobalans. One of the most common methods in the sole-leather tannery is to add a certain quantity of ground myrobalans to the handler of liquors. These liquors are almost invariably passed down the tannery as suspenders, and where myrobalans have been added, sufficient acid is, in many cases, developed naturally to prevent the need for artificial acidification. Some tanners have also taken advantage of the acid-developing power of myrobalans by suspending hides from the rounding table in pure myrobalans liquor before passing to the ordinary suspender.

In view of these facts, it became of interest to see how far the samples under investigation differed in their acid-developing power.

In order to estimate this under comparative, and as far as possible under tannery, conditions, 50 grms. of each of the finely-ground samples were placed in beakers with 500 c.c. of distilled water, and allowed to stand, covered up to prevent evaporation, for five days, stirring up at frequent intervals; 50 c.c. of each of the liquors were now measured off, filtered until perfectly clear, and the acidity estimated in a small portion of it by titration with saturated lime water, the point when an additional drop of lime water caused a permanent turbidity, due to the acids being neutralized, and the formation of insoluble "calcium tannate" (Procter's method), being considered the end of the reaction. To the remaining myrobalan powder and liquor (450 c.c.) an additional 50 c.c. of water was added to make up for that removed for the acidity determination, and the whole was allowed to stand for a further five days, stirring



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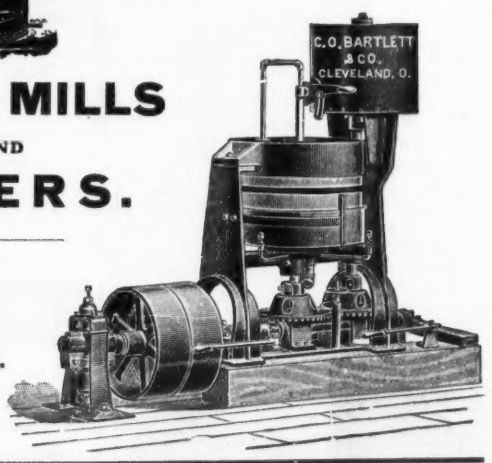

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frequently, as before; 50 c.c. was again removed, and the acidity determined as before, and the remaining 450 c.c. put back for further testing after another six days, this time no addition of water being made to make up for the liquor removed. Similar estimations were also made when the liquors had been allowed to stand altogether 23 and 30 days.

The results of these determinations are given in Table V., calculated as percentage of acetic acid developed, allowance being made for the liquor removed when the determinations were made.

From an examination of the table it will be seen that, taking the three varieties of each sample together, the Bhimley variety develops most acidity. If we exclude Jubblepore II. for the reason afterward stated, the Jubblepore myrobalans develop least acidity. On reference to the previous table it will be seen that this variety develops most bloom, and it is therefore of interest to note that the sample giving the greatest yield of bloom also gives the least acid.

This fact is of some little practical importance. We have already pointed out that myrobalans have two principal uses in the sole-leather tannery, (1) as dusting material in the dusters and layers, and (2) to increase the acidity of the suspenders; and as a result of our experiments Bhimley myrobalans are distinctly superior for the latter purpose, while Jubblepores are much the best where bloom is wanted.

As there was considerable difference in the amount of acidity developed from the different samples examined,

TABLE V.

Acidity, in Terms of Acetic Acid.
Pounds of Acetic Developed from 100 Pounds of Myrobalans After Standing.

	5 days.	10 days.	16 days.	23 days.	30 days.
	Lb.	Lb.	Lb.	Lb.	Lb.
Picked Bhimley..	2.4	3.7	4.1	4.8	5.4
Bhimley 1.....	3.2	5.1	5.8	6.3	6.4
Bhimley 2.....	3.2	5.1	5.6	5.6	6.5
Picked Rajpore..	2.4	3.9	4.5	4.9	5.4
Rajpore 1.....	3.1	4.3	4.7	5.3	6.2
Rajpore 2.....	2.6	3.6	3.9	4.0	4.5
Picked Jubblepore	2.0	2.7	3.2	3.2	3.4
Jubblepore 1.....	1.9	3.4	3.8	4.1	4.5
Jubblepore 2*....	3.3	4.2	4.6	4.9	6.3
Vingorlas 1.....	2.9	3.7	4.4	4.7	5.4
Fair Coast Madras	2.6	3.4	4.0	4.2	4.8

*It is probable that the acidity developed by Jubblepore 2 is abnormally high in comparison with the other samples, as this determination had to be made when the weather was much warmer, and it is extremely probable this would produce more acid.

we thought it might be of interest to determine the relative quantities of sugar contained in the different samples.

	Sugar. Per cent.
Picked Bhimley	3.3
Bhimley 1	3.5
Bhimley 2	3.1
Picked Rajpore	3.2
Rajpore 1	3.0
Rajpore 2	2.9
Picked Jubblepore	3.5
Jubblepore 1	3.7
Jubblepore 2	3.9
Vingorlas 1	3.1
Fair Coast Madras	3.4

Messrs. Fisher, King & Co. have been good enough to supply us with a list of maximum and minimum prices for the past season. These prices may, of course, alter with the season, which is now commencing, as the price is regulated by the demand for a certain variety, and also by the harvest, one district giving possibly a good harvest this season which gave a poor one last.

	Price per cwt. s. d.		Average price per cwt. s. d.	Price per unit of tan per ton. s. d.
Picked Bhimley...	7	1½	....	4 3¾
Bhimley 1.....	6	4½@6 10½	6 7½	3 5.3
Bhimley 2.....	3	7½@4 3	3 11	2 2.6
Picked Rajpore....	5	0 @5 1½	5 1	3 1.9
Rajpore 1.....	4	4½@4 10½	4 7½	2 7.2
Rajpore 2.....	3	7½@3 9	3 8	2 7.8
Picked Jubblepore.	5	4½@6 1½	5 9	3 11.7
Jubblepore 1.....	4	10½@6 0	5 5	2 11.6
Jubblepore 2.....	3	10½@4 3	4 1	2 11.8
Vingorlas 1.....	4	4½@4 10½	4 7½	2 11
Fair Coast Madras.	3	9 @4	4 0	2 3.5

Summarizing the results of the work, we have shown that, apart from price, Bhimley myrobalans come first for their acid-developing power, while Jubblepores and Vingorlas yield the most bloom. Bhimleys also produce the best-colored leather, and, taken as a class, show the highest percentage of tanning matter. In order to compare the result of tannin determination with the average price for each variety, we have calculated the cost of 1 per cent. of tannin per ton, or of one unit of tan per ton, and in the above table it can be seen that the most expensive variety costs 4s. 3¾d. per cent. per ton, the cheapest working out at 2s. 2.6d.

The authors trust that these results will be useful to the trade; they have not ventured to theorize or draw conclusions from the results, as they are aware that so much depends upon the method of use and the blend of the tanning liquors, but, as the experiments were all carried out under identical conditions, the results are in each case comparable one with another.

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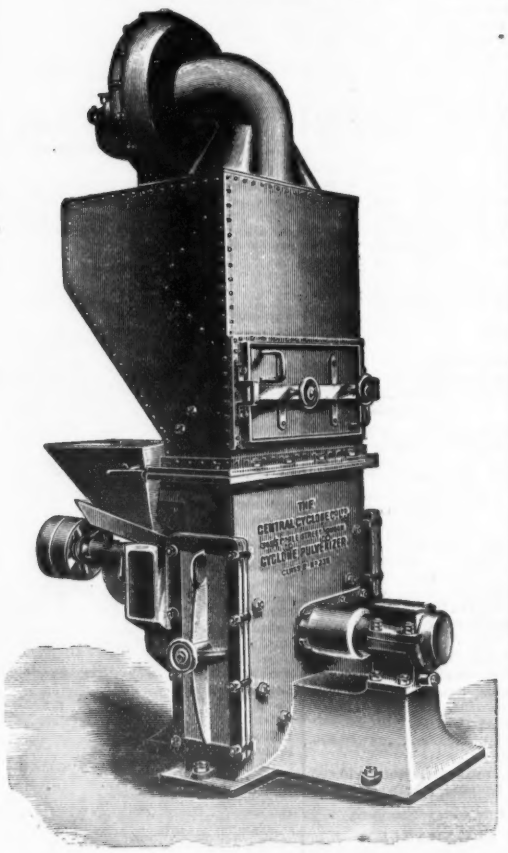

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14½ in. x 15 in. McIntosh & Seymour,
13 in. x 12 in. Armington & Sims,
13 in. x 14 in. Vertical Fitchburg Automatic,
12 in. x 24 in. Buckeye Automatic,
12 in. x 15 in. Ide Automatic,
12 in. x 12 in. Armington & Sims,
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PETROLEUM MARKET.

Saturday Noon, Jan. 2, 1904.

The past week has brought an unpleasant surprise to the operators in the fields in the way of a reduction in the price of the product, and this coming at a time when a further advance was confidently expected made the disappointment the keener. Here the decline of five cents on crude caused little surprise, as there had been two cuts in the price of refined and the opinion prevailed in some circles that the price of crude had been advanced too rapidly. It is a great disappointment to those who had so confidently expected $2 oil, that goal now appearing farther off than when oil prices were lower than they are at present. Various are the reasons assigned for the reduction in price, some claiming it was made necessary, as was the previous decline in refined, to a falling off in the demand, the consumption abroad have fallen off and preference given to the cheaper Russian oil. Others see in this the effect of the competition of refined from Texas crude, considerable quantities of which have been shipped North during the past few months. Still others believe the deals of the Standard Oil Company with the Galician and Russian oil interests may account for it all, seeing in this the prospect of supplying the foreign trade by this concern from these sources at the expense, or exclusion, of the American product. Certainly there is no such change in the field or statistical situation to cause the expectation of a decline, the few gushers recently reported not having added materially to the total production. The reports from the principal producing districts during the past week, while recording the incoming of a few wells of large caliber, have shown no important change in the field situation. The large majority of productive wells brought in have been small pumpers, while the percentage of unproductive wells has been larger than during either of the preceding weeks in December. Reports from other fields show no important change. In Texas several gushers of exceptional capacity have been reported, and it is claimed that refining facilities are being increased at a rapid rate. The price continues somewhat unsettled, but 52c. is claimed as fairly representing market values, while reports of sales at 50c. have been sent out. Others are holding for higher figures, but the price appears to depend upon the needs of the producers, those finding it necessary to realize on their oil being obliged to take what they can get, irrespective of the market price.

Refined and Products.

There has been a further decline in the price of refined, and this being followed by a decline in crude at the wells, has tended to disarrange the plans of buyers somewhat, and the tendency now appears to be to withhold placing orders pending further possible changes. For export the requirements have been rather light, the total engagements footing up about 150,000 bbls., all for shipment in bulk. There is no demand for refined in barrels for export. The price for barreled oil was reduced on Monday to 9.10c. for New York loading and 9.05c. for Philadelphia loading. The principal foreign markets continue easier. Quotations to-day by cable were:—Antwerp, 22f.; Bremen, 6.35m.; London, 7⅝d., and Liverpool, 7¾d. Freight rates are steady at 2s.@ 2s. 3d. hence to London, and 2s. 3d.@ 3s. 3d. to Continental ports, as to port and vessel. Home trade lots have been in active request and are firm on the basis of 12c. for 150 deg. water white from tanks and 15c. in barrels.

Cases for export have been in light request, and sales of about 50,000 are reported. The price of plain tops has been reduced to 11.80c. Freight rates are firm. Nominal rates for large vessels are:—For Amboy, 20@21c.; Calcutta, 10@11c.; Colombo, 20@21c.; Java, 16@ 17c.; Penang, 17@18c.; Hong Kong, 13@ 14c.; Rangoon, 20@21c.; Saigon, 16@17c.; Shanghai, 19½@20c.; Singapore, 18@19c., and Yokohama, 17@18c.

Crude for export has been in fair request, and sales of over 40,000 barrels are reported. Pennsylvania crude is quoted at 9.10c., in barrels. Cases for export have not been in request, and no sales have been reported.

Crude naphtha has been firm at 12.40c. For export sales of about 15,000 bbls. have been reported.

Closing Quotations.

CRUDE.

National Tran. certificates, ℔ bbl.	$1.85@1.86
Pennsylvania crude, bbls., ℔ gal.	9.10
Pennsylvania, crude, in bulk	6.20
Residuum, bbls., for export	**6@ 6½**

CRUDE AT THE WELLS.

The following are the prices paid by the pipe lines for crude as delivered from the wells:—

	1903.	1902.
Tiona ℔ bbl.	$2.00	$1.69
Pennsylvania	1.85	1.54
New Castle	1.72	1.41
Corning	1.65	1.34
North Lima	1.36	1.15
South Neodesha	1.36	..
Whitehouse	1.30	1.24
South Lima	1.31	1.10
Indiana	1.31	1.10
Somerset	1.30	99
North Neodesha	1.16	..
Ragland	66	58
Canadian Oil:—		
Petrolia	2.37	2.96
Oil Springs, less pipeage	2.44	2.03

REFINED—FOR EXPORT.

Cargo lots for export, bbls. ℔ gal.	—@ 9.10
In bulk	—@ 6.20
Philadelphia loading, bbls.	—@ 9.05
150° W. W., bbls.	—@14.05
In bulk	—@ 9.70

REFINED—JOBBING LOTS.

In barrels, pkgs. included.

120 fire test, S. W. ℔ gal.	— @ 14
130 fire test, S. W.	— @ 14
150 fire test, W. W.	— @ 15
In bulk from tanks	— @ 12
300 fire test	13¼@ 13¾

REFINED IN CASES—110 FIRE TEST.

Two-five low screw, cargo, lots	11.80
5,000 to 10,000	11.95
1,000 to 5,000	12.00
700 to 1,000	12.10
400 to 700	12.20
300 to 400	12.30
200 to 300	12.40
100 to 200	13.30
Under 100	13.80

NAPHTHA AND GASOLINE.

Naphtha, crude, car lots, 68@72 deg.	—@12.40
crude, cargo lots, 68@72 deg.	—@12.40
crude, 70 deg	—@12.90
sweet, 62@63 deg	—@ 15
76 deg	—@ 17
"stove"	—@ 15
Gasoline, 86 deg	—@ 17
88 deg	—@ 19
90 deg	—@ 22

Petroleum Statistics.

RUNS—PENNSYLVANIA OIL.

			Day.	Total Reported.
Friday,	Dec.	25	18,346	1,666,954
Sat. Sun.,	"	26 & 27	143,361	1,810,315
Monday,	"	28	54,359	1,864,674
Tuesday,	"	29	71,364	1,936,038
Wednesday,	"	30	65,941	2,001,979
Thursday,	"	31	....	.....

	1900.	1901.	1902.	1903.
Jan.	2,836,815	2,934,943	2,559,185	2,621,892
Feb.	2,511,036	2,509,852	2,199,982	2,286,710
March	2,915,673	2,869,586	2,560,762	2,701,879
April	2,889,993	2,791,932	2,635,929	2,626,408
May	3,074,578	2,921,334	2,713,013	2,598,408
June	3,000,272	2,712,780	2,529,449	2,678,675
July	3,032,983	2,915,841	2,777,650	2,668,460
Aug.	3,125,114	2,862,228	2,664,141	2,548,279
Sept.	2,920,457	2,585,682	2,727,494	2,570,881
Oct.	3,196,985	2,755,311	2,791,533	2,583,319
Nov.	2,947,155	2,519,915	2,532,007	2,281,533
Dec	3,014,468	2,566,706	2,669,283	.....
Year	35,486,529	32,496,116	31,360,448	.....
Average	2,957,211	2,745,509	2,613,371	2,560,586

DELIVERIES—PENNSYLVANIA OIL.

			Day.	Total Reported.
Friday.	Dec.	25	21,346	1,811,544
Sat.-Sun.,	"	26 & 27	183,426	1,994,970
Monday,	"	28	86,275	2,081,245
Tuesday,	"	29	79,342	2,160,587
Wednesday,	"	30	80,126	2,240,713
Thursday,	"	31	....	.....

	1900.	1901.	1902.	1903.
Jan.	2,887,970	3,135,704	3,013,150	2,885,789
Feb.	2,747,666	2,585,297	2,282,872	2,195,668
March	2,797,661	2,885,557	2,613,412	2,792,321
April	2,844,496	2,884,188	2,447,301	2,556,172
May	2,793,247	3,033,527	3,410,053	2,735,796
June	2,880,483	2,843,781	2,708,493	2,670,232
July	2,756,173	3,287,511	2,740,665	2,679,278
Aug.	3,383,582	3,250,421	2,911,251	2,696,969
Sept.	3,031,430	3,075,809	2,792,104	2,663,484
Oct.	3,002,215	3,244,610	3,218,685	2,623,539
Nov.	3,144,739	3,116,322	2,898,603	2,529,180
Dec.	3,088,358	3,026,982	3,117,782	.....
Year	35,358,024	36,339,709	34,154,461	.....
Average	2,940,502	3,028,309	2,846,205	2,639,262

CHARTERS—CRUDE EQUIVALENT.

			Day.	Total.	Av'ge.
Sat.-Sun.,	Dec.	26 & 27.	118,135	1,786,484	66,166
Monday,	"	28	69,841	1,856,325	66,297
Tuesday,	"	29	31,746	1,888,071	65,106
Wed'sday,	"	30	46,349	1,934,420	64,461
Thursday,	"	31	52,380	1,986,800	64,090
Friday,	Jan.	1	....	.....	....

	1900.	1901.	1902.	1903.
Jan.	1,859,225	2,397,332	2,878,610	1,162,883
Feb.	1,343,926	1,790,875	1,715,375	1,396,350
March	2,175,073	2,023,459	2,696,879	1,526,424
April	1,810,763	2,800,910	1,818,864	1,887,649
May	1,062,851	2,420,809	1,796,904	1,521,348
June	2,292,075	2,312,447	2,303,174	1,824,211
July	2,061,761	2,782,538	2,090,021	2,467,238
Aug.	1,165,198	2,591,191	2,221,160	2,267,480
Sept.	2,164,186	2,459,552	1,946,905	1,918,602
Oct.	2,322,275	2,265,038	2,013,388	1,885,999
Nov.	1,705,256	2,724,245	2,027,816	1,911,333
Dec.	2,027,385	2,229,595	1,773,032	1,986,800
Year	24,200,004	27,838,291	25,282,128	21,756,317
Av'ge	2,016,667	2,319,858	2,106,844	1,814,610

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ending Dec. 31, and from Jan. 1, were as follows:—

	Week.	Year.	1902.
Refined, bbls. & blk.	181,700	9,849,800	10,568,600
Refined, cases	....	13,938,000	14,184,020
Crude, bbls. & blk.	39,900	2,071,100	2,548,200
Crude, cases	....	386,000	198,000
Naphthha, bbls.	16,700	147,400	240,500
Residuum, bbls.	3,800	55,800	814,100
Lubricating, bbls.	3,400	110,100	176,200
Total, bbls. cde. eq.	318,452	22,377,317	24,999,997

CLEARANCES FOR THE WEEK.

During the week ending Dec. 31, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

Refined	4,180,665	356,792,937	471,083,562
Crude	101	167,974	456,289
Naphtha	225,245	8,018,440	10,423,911
Residuum	195,000	2,383,559	11,872,979

EXPORT STATISTICS.

The following table shows the total exports from the port of New York and from the United States, reduced to crude equivalent, in gallons for the week ending Dec 31; also total shipments to date, with comparisons with 1902:—

From N. Y., week ending Dec. 31	5,574,321
Total from N. Y. from Jan. 1, 1903.	475,082,904
Same period last year	629,903,296
Decrease	154,820,392
From U. S. week ending Dec. 31	13,836,031
Total from U. S. since Jan. 1, 1903.	1,032,834,571
Same period last year	1,181,162,457
Decrease	148,327,886

TOTAL EXPORTS BY PORTS.

	1903.	1902.
New York	475,082,904	629,903,296
Philadelphia	501,130,989	494,393,104
Baltimore	46,326,059	53,823,073
Boston	929,148	681,806
San Francisco	9,365,471	2,360,978
Grand totals	1,032,834,571	1,181,162,457

Foreign Quotations.

REFINED.

	Antwerp. Francs.	Bremen. Marks.	London. Pence.	L'pool. Pence.
Monday	22¼@—	6.35	7⅝@ 7¾	7¾@—
Tuesday	22 @—	6.35	7⅝@ 7¾	7¾@—
Wednesday	22 @—	6.35	7⅝@—	7¾@—
Thursday	22 @—	6.35	7⅝@—	7¾@—
Friday	22 @—	6.35	7⅝@—	7¾@—
Saturday	22 @—	6.35	7⅝@—	7¾@—

PETROLEUM CHARTERS.

Following is a list of vessels chartered and loading or to load petroleum at New York, Philadelphia, Baltimore and Boston. Quantities are refined in barrels, unless stated otherwise:—

New York.

Week ended Aug. 14.

Fr shp Haudandine, Japan 18½c. cs 70,000

Week ended Oct. 16.

Fr bk La Rochefoucauld, Shanghai, 21c. cs 75,000

Week ended Oct. 23.

Br str Volga, Shanghai, 25c. cs 170,000
Am shp Arthur Sewall, Shanghai, 20c. cs 130,000
Br bk Howard D Troop, Shanghai, 20c cs 90,000

Week ended Nov. 6.

Br bk Puritan, Java, 16@18c. cs 90,000
Fr str Breiz Huel, Shanghai, 25c. cs 160,000

Week ended Nov. 13.

Br str Ardandearg, Shanghai, 25c. cs 120,000

Week ended Nov. 20.

It shp Jolanda, Java, 16@18c. cs 70,000
Br. shp Mersey, Calcutta, 10c. cs 70,000
It shp Guiseppina, Java, 16@18c. cs 70,000

Week ended Nov. 27.

Fr bk Alice Marie, Japan, 17½c. cs 70,000
It shp Maria Teresa, Java, 15@17c. cs 75,000
Fr bk Bourbaki, Hong Kong, 17½c. cs 75,000
Gr str Corinthia, Kurrachee, 17c. cs 130,000

Week ended Dec. 4.

Am shp Dirigo, Shanghai, 19½c. cs 115,000
Fr bk Cornil Bart, Shanghai, 19½c. cs 75,000
Nor str Guernsey, Shanghai, 24c. cs 170,000
Fr bk Buffon, Japan, 17½c. cs 70,000

Week ended Dec. 11.

Br bk Landskona, Rouen, 2s. 6d. nap 8,500
Fr bk Jacobson, Shanghai, 19½c. cs 70,000

Week ended Dec. 24.

Br str Indrades, Australia, 21c. cs 175,000
Nor bk Ole Smith Piong, Marseilles, 2s. 10½d nap 3,700

Philadelphia.

Week ended April 24.

Br shp Brodick Castle, Marseilles, 2s. cde 3,000

Week ended Aug. 14.

Ger shp Willy Rickmers, Japan, 18½c. cs 80,000

Week ended Aug. 28.

Fr bk Duc d'Aumale, Japan, 18½c. cs 70,000
It bk Fratelli-Beverino, Australia, 17@ 18c. cs 85,000

Week ended Sept. 4.

It bk Italia, Japan, 19@20c. cs 120,000

Week ended Oct. 23.

Fr shp Molier, Shanghai, 20c. cs 70,000
Fr shp Duquesne, Japan, 18@19c. cs 70,000

Week ended Nov. 20.

Str Japan, 23½c. cs 150,000

Week ended Nov. 27.

Br str Nithsdale, Japan, 23½@24½c. cs 130,000

Week ended Dec. 4.

Br bk Cedarbank, Melbourne, 13c. cs 110,000

Week ended Dec. 11.

Aus str Piltvice, Japan, 22@23c. cs 150,000

Week ended Dec. 18.

Br shp Walden Abbey, Sydney, 13½c. cs 70,000
Br bk Trafalgar, New Zealand, 17@18c. cs 70,000

PETROLEUM CLEARANCES.

Following are the clearances of petroleum from the ports of New York, Philadelphia Baltimore, Boston and San Francisco on the dates named. Refined, unless otherwise specified:—

New York.

Dec. 19.

Br str Braemar, Manila, 40,000 cs ref, 400 drs nap
Am str Coamo, Porto Rico, 350 cs
Am str Zulia, Curacao, 241 cs, 1 bbl
Am str Zulia, Maracaibo, 1,000 cs
Am str Mexico, Havana, 25 bbls

Dec. 21.

Br str Mimiro, Auckland, 1 bbl ref, 300 cs ben

Dec. 22.

Cub str Cienfuegos, Cuba, 1,630 cs ref, 20 cs gas, 2 bbls, cde
Br str Hilary, Para, 6,200 cs
Br str Hilary, Manaos, 3,160 cs
Am str City of Washington, Colon, 585 cs, 1 bbl

Dec. 23.

Br str Sabine, Cape Town, 3,750 cs

Dec. 24.

Br sh Johana, Hong Kong, 70,508 cs
Br sch Carib II, Porto Cortez, 900 cs, 7 bbls
Br sch Carib II, Truxillo, 488 cs, 22 bbls
Br sch Carib II, Ceiba, 12 cs
Nor str Kong Haakon, Pilleys Is, N F, 35 bbls
Ger str Bellaggio, Santos, 50 bbls resid
Ger str Bellaggio, Pernambuco, 15,000 cs
Ger str Bellaggio, Rio Janeiro, 50 bbls resid
Br str Pretoria, Bermuda, 97 bbls, 145 cs
Am str Havana, Havana, 330 cs
Am str Havana, Progreso, 210 cs
Am str Saratoga, Nassau, 4 bbls, 65 cs
Am str Saratoga, Tampico, 1 bbl, 10 cs
Br str Fontabelle, Demerara, 2,000 cs
Br str Fontabelle, Martinique, 75 cs
Br str Fontabelle, Barbadoes, 1,500 cs
Br str Fontabelle, St Kitts, 25 cs
Br str Fontabelle, St Lucia, 250 cs
Br str Fontabelle, St Thomas, 5 cs

Dec. 26.

Nor str Talisman, Guadeloupe, 750 cs
Nor str Talisman, Martinique, 500 cs
Nor bk Johan Irgens, Furt Blaye, 4,288 bbls nap

Dec. 28.

Ger str Adirondack, Jacmel, 100 cs
Ger str Paula, Hamburg, 1,200,000 cs

Dec. 29.

Am str Seguranca, Colon, 500 cs

Dec. 30.

Ger str Deutschland, Avonmouth, 1,460,000 gls ref blk, 190,000 gls resid blk

Philadelphia.

Dec. 19.

Br str Lackawanna, Dublin, 1,590,716 gls blk

Dec. 21.

Fr bk Alice et Isabelle, Sables D'Olonne, 600 bbls ref, 200 bbls nap, 271,799 gls cde blk

Dec. 22.

Fr bk French Marie, Marseilles, 500 cs ref, 864,076 gls cde blk

Dec. 23.

Br str Potomac, Liverpool, 1,313,122 gls blk

Dec. 24.

Fr bk Jules Henri, Marseilles, 500 cs ref, 861,834 gals cde blk

Baltimore.

Dec. 24.

Dtch str Rotterdam, Amsterdam, 1,749,508 gls blk

Boston.

Dec. 19.

Str Halifax, Halifax, 2,075 gls

Dec. 30.

Str Boston, Yarmouth, N S, 250 gls

San Francisco.

Dec. 18.

Str Nevadan, Honolulu, 215 cs, 3 bbls
Str Nevadan, Kahului, 21 cs ref, 10 cs gas

Dec. 19.

Str San Jose, Mexico, 7 cs
Str San Jose, Guatemala, 96 cs
Bk Edw May, Makaweli, 200 cs

Dec. 21.

Sch Aloha, Honolulu, 102 cs

Dec. 22.

Br str Doric, Japan, 5 cs
Str Umatilla, Br Columbia, 6 cs

Dec. 23.

Bktn Omega, Mexico, 166 cs

EXPORTS OF PETROLEUM.

Following are the exports of petroleum products from the port of New York (in gallons) during the past week and since Jan. 1, as also the exports during the corresponding period of last year:—

Refined.

	For week.	Since Jan. 1.	Same time last year.
Aalborg	.....	.....	1,200,695
Aarhuus	.....	2,530,000	905,789
Accra, W. C. A.	.....	10,000	32,000
Adelaide	.....	1,886,910	3,064,690
Aden	.....	72,000	50,000
Ajaccio	.....	.....	67,200
Algiers	.....	107,600	224,060
Algoa Bay	.....	1,530,600	2,192,661
Amsterdam	.....	15,141,939	11,005,274
Anjier	.....	2,022,080	7,267,300
Antigua	.....	50,719	43,229
Antofagasta	.....	58,600	37,520
Antonio	.....	75,410	.....
Antwerp	.....	21,556,400	27,627,500
Arica	.....	3,000	3,000
Auckland	.....	879,700	1,747,700
Avonmouth	1,460,000	8,535,000	10,831,285
Axim, W. C. A.	.....	350,000	.....
Azores	.....	173,927	284,564
Bahamas	.....	1,624	2,541
Bahia	.....	1,821,890	2,380,900
Barbadoes	15,000	352,243	417,318
Barranquilla	.....	68,716	80,367
Barrow	.....	.....	1,205,000
Bastic	.....	.....	110,400
Bayin, W. C. A.	.....	122,558	.....
Beira	.....	.....	42,800
Belfast	.....	.....	1,205,000
Belize	.....	.....	9,500
Bermuda	7,473	333,062	370,585
Bluefields	.....	76,352	79,079
Bombay	.....	.....	5,297,250
Bonny	.....	44,500	32,000
Bordeaux	.....	.....	1,000
Bocas del Toro	.....	25,000	27,750
Bremen	.....	37,638	20,454
Brisbane	.....	1,190,310	1,115,410
Bristol	.....	5,000	.....
Buenos Ayres	.....	10,344,120	7,962,482
Bremerhaven	.....	2,585,000	2,570,000
Cabadello	.....	347,500	100,000
Calcutta	.....	1,142,010	3,259,300
Caldera	.....	4,250	2,750
Callao	.....	257,650	247,000
Campeche	.....	1,430	1,000
Cape Coast, WCA	.....	15,000	104,560
Cape Town	37,500	1,898,080	3,664,280

Cape Verde Isl..	.....	16,500	.....
Cartagena	.....	310,539	268,440
Carupano	.....	34,356	14,670
Casa Blanca....	.....	47,000	72,820
Catania	.....	99,291	50,000
Ceara	.....	346,070	299,860
Cebu	.....	.....	400,800
Celba	120	5,620	.....
Charlottetown P. E. I.....	.....	140,300	104,750
Cheefoo	.....	1,972,000	400,000
Colombo	.....	1,435,750	1,483,450
Colon	10,900	863,126	697,200
Conarky	.....	.....	160,000
Copenhagen	.....	.....	1,325,000
Coquimbo	.....	19,800	.....
Cork	.....	.....	223,808
Corn Island.....	.....	2,000	2,525
Coro	.....	2,650	13,720
Corrall	.....	70,000	70,000
Cuba	30,867	644,641	1,078,315
Cumaha	.....	1,500	3,000
Curacao	2,460	138,055	212,522
Delagoa Bay ...	.....	749,920	158,010
Demerara	20,000	609,722	521,992
Desterro	.....	487,210	414,340
Domenica	.....	37,143	33,153
Dover, f. o.....	.....	3,548,253	3,813,161
Dunedin	.....	314,150	199,310
Dublin	.....	1,600,000	7,450,000
Durban	.....	446,876	500
Dutch Guiana ..	.....	284,870	315,500
East London ...	.....	1,444,920	1,642,300
Etem	.....	22,000	8,000
Flushing, f. o...	.....	79,783,150	94,515,000
Foochow	.....	.....	1,275,360
Forcados	.....	57,050	369,840
Frederica	.....	276,500	431,030
Fremantle	.....	1,797,040	1,040,660
French Guiana..	.....	196,520	119,534
Frontera	.....	5,000	.....
Gefle	.....	340,884	398,860
Genoa	.....	250	.....
Ghent	.....	.....	2,700,000
Gibraltar	.....	240,020	337,784
Glasgow	.....	.....	500
Grand Cayman..	.....	.....	51
Grenada	.....	97,750	130,460
Greytown	.....	138,190	201,976
Guadeloupe	7,500	296,282	183,283
Guanta	.....	3,000	13,850
Guanoco	.....	1,500	.....
Guayaquil	.....	253,000	320,000
Haipkong	.....	397,100	.....
Hakodate	.....	2,873,230	3,502,870
Halifax	.....	979,861	1,118,270
Hamburg 1,200,000		4,412,150	9,167,500
Havre	.....	.....	4,200
Hayti	1,000	686,719	678,439
Hiogo	.....	5,000	4,591,740
Hobart	.....	10,000..	.....
Hodeidah	.....	.....	180,000
Hong Kong	705,080	15,558,550	19,914,970
Honolulu	.....	.....	50,000
Hudiksvall	.....	150,950	.....
Hull	.....	2,803,937	2,003,514
Iquique	.....	8,000	12,200
Iquitos	.....	33,252	52,650
Jamaica	.....	972,404	1,070,288
Kjoge	.....	.....	138,262
Kobe	.....	1,000	.....
Koenigsburg ...	.....	.....	174,165
Kurrachee	.....	950,000	750,000
Lagos	.....	117,090	100,000
La Guayra	.....	577,356	535,019
La Roumania ..	.....	90,000	65,000
Las Palmas	.....	963,450	953,500
Laurentian	.....	2,000	.....
Lisbon	.....	409,162	2,636,722
Liverpool	.....	250	5,905,150
London	.....	31,885,995	25,175,676
Lyttleton	.....	483,800	348,900
Macassar, f. o...	.....	525,500	348,980
Maceio	.....	679,950	710,000
Madeira	.....	63,000	2,000
Madras	.....	1,330,000	.....
Majunga	.....	307,080	.....
Malta	.....	.....	42,500
Manaos	31,810	735,880	519,781
Manchester	.....	187,155	4,074,940
Manila	400,000	3,341,740	2,317,020
Maracaibo	10,000	184,534	190,300
Maranham.... .	.....	362,890	333,981
Martinique	5,750	198,073	208,712
Mauritius	.....	167,000	203,520
Melbourne	.....	1,494,440	5,614,911
Mollendo	.....	133,500	163,500
Moluccas	.....	.....	117,500
Mombassa	.....	10,000	.....
Montevideo	.....	3,054,900	3,716,597
Montserrat	.....	.....	150
Mossel Bay	.....	80,100	157,960
Naples	.....	.....	2,400
Nassau	854	112,476	109,394
Nassau, N. P...	.....	9,060	33,800
Newcastle	.....	215,000	38,800
Old Calabar	.....	82,290	45,070
Oporto	.....	.....	1,266,864
Oran	.....	.....	20,000
Padang	.....	.....	2,467,400
Parahyba	.....	175,000	224,000
Para	62,000	1,862,984	1,812,700
Pascasmayo	.....	6,000	20,000
Payta	.....	43,600	8,100
Pernambuco	150,000	2,913,800	3,110,600
Pilleys Is, N F..	1,863	1,863	.....
Pimental	.....	3,000	12,000
Pisaqua	.....	20,500	2,000
Pisco	.....	17,000	31,000
Plymouth	.....	1,220,000	156,026
Port Chalmers ..	.....	53	258,000
Port Elizabeth..	.....	98,160	82,000
Port Limon	.....	104,543	120,807
Port Louis	.....	177,150	.....
Port Natal	.....	1,677,700	2,232,410
Port Bolivar	.....	5,000	.....
Porto Cabello ..	.....	238,230	206,550
Porto Rico	.....	.....	2,000
Progreso	2,100	21,580	8,500
Puerto Cortez ..	9,362	31,078	12,910
Punta Arenas ..	.....	63,070	73,970
Re Union	.....	.....	675,250
Rio Gr. do Sul ..	.....	1,338,570	2,015,560
Rio Janeiro	.....	4,526,950	5,613,680
Rosario	.....	2,119,400	1,481,600
Rotterdam	.....	35,681,050	41,207,509
Sackville	.....	12,500	.....
Saigon	.....	616,720	711,000
Salaverry	.....	47,000	53,000
Salt Pond, WCA.	.....	10,000	25,000
San Andreas	.....	4,124	43,781
San Domingo ..	.....	484,009	446,544
San Fernando ..	.....	5,380	66,260
Santos	.....	3,573,930	4,296,870
Savanilla	.....	330,469	216,454
Sekondi	.....	.....	15,000
Shanghai	.....	17,832,970	35,434,060
Sierra Leone ...	.....	5,000	20,000
St. Andrew	.....	.....	1,500
St. Croix	.....	37,678	54,029
St. John, N. B..	.....	525,000	1,793,379
St. Johns, N. F.	.....	756,959	688,345
St. Kitts	250	112,150	146,450
St. Lucia	2,500	77,085	62,400
St. Martins	.....	5,350	6,550
St. Thomas	50	34,710	33,542
St. Vincent	.....	51,556	91,008
Sourabaya	.....	902,240	2,770,270
Southampton ...	.....	1,750,000	2,367,834
South Shields ..	.....	180,000	1,270,000
Stockholm	.....	.....	509,490
Svendborg	.....	350,000	.....
Sunderland	.....	987,473	2,820,000
Sundsvaal	.....	240,000	410,500
Sydney	.....	2,424,994	3,984,860
Sydney, C. B....	.....	10,000	.....
Talcahuano	.....	432,900	1,042,750
Tampico	153	2,203	1,000
Teneriffe	.....	277,670	.....
Tilt Cove	.....	12,133	10,213
Tourane	.....	200,000	.....
Trieste	.....	.....	3,000
Trinidad	.....	693,927	688,950
Trinite	.....	2,500	.....
Truxillo	6,023	23,034	14,500
Tsintau	.....	746,610	950,000
Tuborg	.....	221,950	366,197
Turks Island ...	.....	15,377	15,021
Valparaiso	.....	5,331,300	3,222,500
Vera Cruz	.....	11,350	13,200
Victoria	.....	300,000	163,700
Vienna	.....	10,000	.....
Wellington	.....	969,300	687,430
Winnebah	.....	5,000	.....
Yokkaihi	.....	1,634,220	1,291,830
Yokohama	.....	7,785,210	16,193,000
Zanzibar	.....	406,960	823,210
Totals		4,180,665 346,792,837	472,532,561

Crude.

Fermuda	.....	51	.....
Cape Town.....	.....	500	.....
Ciudad Bolivar...	.....	.....	769
Colon	.....	200	.....
Cuba	101	165,070	1,600
Domenica	.....	52	.....
Guanaco	.....	50	.....
Havana	.....	.....	449,414
Hayti	.....	48	.....
Jamaica	.....	.....	158
London	.....	.....	350
Manchester	.....	.....	10,000
Melbourne	.....	.....	1,263
Montevideo	.....	680	.....
Port Limon.....	.....	1,264	51
Port Natal.....	.....	.....	1,784
Porto Rico.....	.....	.....	500
Rio Janeiro.....	.....	50	.....
St. Croix.....	.....	.....	52
Totals	101	167,975	456,941

Naphtha.

Aarhuus	.....	.....	64,656
Adelaide	.....	8,824	9,348
Algiers	.....	.....	10,000
Algoa Bay.....	.....	27,472	19,380
Antofagasta	.....	600	200
Arica	.....	100	.....
Auckland	3,000	113,000	78,681
Azores	.....	20	.....
Bahia	.....	1,017	1,086
Barbadoes	.....	50	50
Barranquilla	.....	920	344
Beira	.....	100	.....
Bermuda	.....	21,540	32,820
Bluefields	.....	800	2,078
Bocas del Toro ..	.....	4,000	500
Bombay	.....	.....	16,000
Brisbane	.....	11,080	18,958
Buenos Ayres....	.....	399,360	81,535
Calcutta	.....	2,500	.....
Callao	.....	160	30
Cape Town.....	.....	32,744	27,209
Cartagena	.....	822	430
Charlottetown, P. E. I.....	.....	800	500
Christchurch	.....	.....	960
Coquimbo	.....	5,650	2,000
Cork, f. o.....	.....	194,227	.....
Corral	.....	4,470	1,000
Cuba	190	8,281	2,412
Curacao	.....	354	211
Delagoa Bay.....	.....	33,151	600
Demerara	.....	670	6,850
Dover, f. o.....	.....	240,335	.....
Dunedin	.....	29,280	13,700
Durban	.....	13,000	.....
Dutch Guiana...	.....	.....	200
East London....	.....	25,168	12,320
Fremantle	.....	26,740	10,329
Furt Biaye.....	218,055	1,463,674	1,675,762
Gibraltar	.....	2,550	.....
Greytown	.....	10	110
Guadeloupe	.....	1,886	297
Guanaco	.....	12	100
Guayaquil	.....	11,000	400
Halifax	.....	5,000	1,000
Hamburg	.....	50	.....
Havre	.....	1,129,408	1,580,588
Hayti	.....	1,232	1,717
Hong Kong.....	.....	20,000	.....
Jamaica	.....	1,201	7,074
Lisbon	.....	.....	38,000
Liverpool	.....	921,750	2,624,678
London	.....	.....	2,663,234
Lyttleton	.....	72,600	10,938
Maceio	.....	.....	95
Malta	.....	2 435	1,486
Manaos	.....	.....	30
Manila	4,000	22,250	79,100
Maranham	.....	210	10
Martinique	.....	100	123
Melbourne	.....	72,620	163,426
Mollendo	.....	600	100
Montevideo	.....	8,831	7,188
Para	.....	239	210
Pascasmayo	.....	.....	200
Pernambuco	.....	2 080	2,837
Pimental	.....	250	50
Port Chalmers..	.....	.....	1,460
Port Elizabeth..	.....	2,200	.....
Portishead	.....	155,600	243,450
Port Limon.....	.....	727	1,455
Port Natal.....	.....	41,395	11,552
Porto Rico.....	.....	.....	610
Progreso	.....	2,895	90
Puerto Cortez...	.....	4,320	250
Rio Gr. do Sul..	.....	150	300
Rio Janeiro.....	.....	2,266	2,630
Rosario	.....	4,985	2,115
Rouen	.....	2,628,654	604,549
San Domingo....	.....	50	120
Savanilla	.....	2,764	1,281
Santos	.....	2,340	355
Shanghai	.....	10,040	8,020
Singapore	.....	2,000	2,000
St. Johns, N. F.	.....	4,782	7,495
St. Kitts.....	.....	10	.....
St. Lucia.....	.....	105	.....
Stockholm	.....	.....	152,050
Sydney	.....	129,460	201,914
Talcahuano	.....	1,250	50
Trinidad	.....	720	655
Truxillo	.....	1,000	1,010
Tuborg	.....	.....	106,750
Venice	.....	1,425	1,200
Wellington	.....	73,909	25,560
Totals	225,245	8,033,916	10,623,898

THE CANFIELD OIL CO. General Office, CLEVELAND, O.

Refiners of Petroleum

Refineries and Compounding Plants at CORAOPOLIS, PA.; FINDLAY, O.; CLEVELAND, O.

The FREEDOM OIL WORKS CO.

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Spindle and Neutral Oils and Wool Stock

FREEDOM, PA., U. S. A.

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(Special Correspondence to the Reporter.)

Consular Certificates of Invoices.

Washington, Dec. 31, 1903.

The Foreign Affairs Committee of the House of Representatives will take up immediately after the holiday recess the framing of the annual diplomatic and consular appropriation bill in the consideration of which the committee will have before it a series of recommendations of great interest to importers in all lines which have been forwarded by the Secretary of State as the result of an elaborate investigation recently concluded by Third Assistant Secretary Peirce. These recommendations included a radical change in the present schedule of fees for certified invoices of goods intended for shipment to the United States, the employment of experts familiar with various lines of industry to assist consuls in determining the accuracy of invoice valuation, the payment of larger salaries to consuls at the leading commercial centres of Europe and the employment of a large staff of consular clerks who are to be American citizens and who will act as vice-consuls in the temporary absence of the consuls. These reforms are urged not only to protect the revenues against undervaluation frauds, but to prevent discrimination against small shippers and also to aid in the extension of the American export trade. In Mr. Peirce's report to the Secretary of State, which the department has forwarded to Congress, the following comments and recommendations are made with reference to the certification of invoices:—

"One of the most important duties of a consular officer is the certification of invoices of merchandise shipped to the United States, the purpose of such certification of invoices being to establish the true value of the goods shipped. In other words, this function of the consular officer furnishes a check upon undervaluation of goods in the protection of our customs tariff. In the year 1902 the volume of imports into the United States amounted to $254,444,709 worth of goods, and when it is considered that for most of this vast volume of merchandise a certified consular invoice was required, the importance and extent of this function of the consul is apparent. On the other hand, a considerable amount of merchandise shipped to the United States is forwarded under the law which limits the necessity of a certified invoice to a shipment of goods amounting to $100 or more, and I am satisfied that there exists considerable abuse of this law, and that what really constitute single shipments are split up into many of less than $100 each.

"Another form of abuse is practiced extensively by forwarding houses and agents of American firms who purchase bills of goods from various manufacturers and dealers and unite the whole into one shipment, attaching the various bills together into one invoice, which is brought to the consulate for certification. I, myself, have seen such invoices, containing from twenty to thirty really separate invoices, attached together and brought to the consulate for certification as a single invoice of the shipment, thereby obtaining for the very small fee of $2.50 consular services consuming a considerable part of the official's day. Presumably a fee is charged for this service in order to recoup the Government for the consul's services. If this is so, then the fee should be a fair one, and proportionate to the work performed, and, while $2.50 is adequate, or more than adequate, for the certification of certain invoices, it is wholly inadequate for an invoice which must take several hours' diligent work to examine. At present the shipper of goods invoiced at $101 pays the same fee as does the shipper of goods invoiced at $100,000.

"I would respectfully suggest that the minimum sum requiring an invoice to be certified should be $25 instead of $100, as at present, and that the fees charged should either be upon a sliding scale, with a minimum fee of 25 cents and a maximum of $50 on invoices of $100,000 or over, or that the system of consolidating invoices into one should be discontinued, and the regular fee, or a reduced one, charged upon each separate invoice. The former would seem to be the more equitable adjustment, but either would greatly increase the revenue from the consular service, probably at least doubling it. Should this reform be made, and could the amount then accruing to the Government from the consular fees be devoted to the maintenance of the consular service, not only would the service be self-sustaining, but it would be possible to put it into a first-rate condition of efficiency."

Continuing, Mr. Peirce points out that the work of the consuls in connection with the certification of invoices a great deal of labor and that to really prevent undervaluation would require a more specialized knowledge than it is reasonable to expect consular officers to possess. The purpose of the certification is to act as a check upon such undervaluations, but the wide range of merchandise imported into the United States from most of the consular districts is such that it would be impossible for any one man to be an expert in all of them, and at present consuls content themselves with selecting the principal items and informing themselves as well as possible as to the true cost of their production. While this system answers, in a certain measure, in Mr. Peirce's opinion, it is crude and imperfect, and he therefore recommends that the system of treasury experts, which now embraces three or four special agents, should be materially extended so that the government should have in its employ in Europe experts covering the chief articles of importation and whose jurisdiction should be extended over the whole of Europe acting in an advisory capacity to the consuls.

In emphasizing the niggardly policy of the United States in the treatment of its consular service, Mr. Peirce says that compensation and allowances for office rent and furnishings are now on so small a scale that on the whole our consulates in Europe present a very shabby appearance. This policy he thinks is very unwise, and he gives an interesting practical illustration showing its folly very conclusively. He says:—

"As the business agent of his government, the consul is the business representative of the most important interests of his country represented in his district, yet in many cases American business firms maintain business agents who are much more highly compensated than the United States Consul at the same place and provided with much greater facilities for performing their work. To illustrate this:—At Calais the exportation of a single line of merchandise to the United States for the year ending June 30, 1902, amounted to about $4,000,000. This merchandise was purchased by various firms in the United States, each maintaining an agent there for the purpose and each agent receiving larger compensation than did our consul and usually allowed from five to eight clerks against the one clerk of our consulate. The interest of the United States in this single line of merchandise amounted to 60 per cent. of $4,000,000, that is to say, $2,400,000. This is but one example of many similar cases."

The State Department put special emphasis upon the necessity of increasing the corps of consular clerks and authorizing them to act as vice-consuls in the absence of their superiors. It has long been the custom at many posts for the consul to select some business man of standing in the community as vice and deputy consul, but the result is that in the absence of the consul the consulate is under the direction of some one who has but little acquaintance with its business and still less with our consular laws and regulations. Ill-paid foreign clerks are usually employed in the consulate, and thus in the absence of the consul the entire business of the office is in the hands of aliens, greatly to the detriment of American trade. It is suggested that if the corps of consular clerks be enlarged and promotion into the consular service be authorized as a reward for faithfulness and efficiency, there would be a vast improvement in the tone of the service and important advantages would accrue to American importing and exporting interests.

Imports and Exports.

Below we give a summary statement of the imports and exports of the United States for the eleven months ending November 30, 1903, compiled by the Department of Commerce and Labor at Washington. We also give the same information for the corresponding period of last year for comparison:—

Imports.

	1902.	1903.
Alizarine and alizarine colors, lbs.	4,338,634	4,159,497
Argols or crude tartar, lbs.	25,567,500	25,002,706
Asphaltum, or bitumen, crude, tons	129,708	154,213
Bark, hemlock, cords.	20,032	13,427
Bark, cinchona or other quinine, lbs.	3,510,095	3,244,103
Bristles, lbs.	2,344,044	2,815,906
Cement, lbs.	719,115,562	904,622,187
Clay of all kinds, tons	176,586	178,488
Coal tar color and dyes	$4,622,202	$4,675,558
Cochineal, lbs.	118,466	137,681
Cocoa, crude, etc., lbs.	50,528,989	50,852,845
Corkwood, or cork bark, manufactured.	$1,735,743	$1,267,696
Corks, mfrs. of	$579,614	$825,426
Cutch and gambier, lbs.	34,781,372	32,733,747
Dyewood, extract, etc.	$3,078,800	$3,178,867
Glass, bottles, etc., empty or filled	$436,422	$469,299
Glass, cylinder, crown, etc., unpolished, lbs.	53,020,695	52,843,947
Glass, cylinder and crown, polished, unsilvered, square feet.	1,660,827	1,940,282
Glass, cylinder and crown, polished, silvered, square feet	6,342	34,924
Glass, plate, fluted, rolled or rough, sq. ft.	322,329	289,230
Glass, plate, cast, polished, unsilvered, square feet	4,514,062	5,740,167
Glass, plate, cast, polished, silvered, sq. ft.	23,205	14,527
Glass, all other	$2,310,192	$2,831,703
Glue, lbs.	4,805,779	3,051,274
Glycerine, lbs.	25,086,516	32,560,231
Grease and oils	$531,366	$484,506
Grease	$356,460	$241,828
Guano, tons	7,525	20,657
Gum, arabic, lbs.	4,031,485	2,382,813
Gum, camphor, crude, lbs.	1,964,705	2,632,878
Gum, chicle, lbs.	3,580,904	4,356,561
Gum, copal and kauri, lbs.	21,687,730	22,831,602
Hops, lbs.	3,338,172	3,171,491
Indigo, lbs.	3,555,492	4,573,453
Lead in ore, lbs.	189,170,761	191,338,648
Lead, pigs, bars, etc., lbs.	4,657,670	5,647,369
Licorice root, lbs.	101,059,159	73,523,878
Lime, chloride of, or bleaching powder, lbs.	104,147,022	101,080,965
Linseed or flaxseed, bu.	501,278	13,501
Logwood, tons	55,030	42,223
Other dyewoods	$205,304	$529,185
Mineral waters, all not artificial, gals.	1,912,151	2,258,699
Nutmegs, lbs.	1,591,877	2,020,620
Oil, whale and fish, gals.	663,498	640,296
Oil, other animal, gals.	199,320	195,855
Oil, mineral, gals.	3,426,794	3,581,226
Oil, olive, gals.	1,376,749	1,330,000
Oil, other fixed	$6,560,799	$6,040,802
Oils, volatile or essential	$2,094,143	$2,084,598
Opium, crude, lbs.	497,570	541,487
Opium, prepared, lbs.	189,341	135,155
Paints and colors	$1,609,644	$1,668,841
Pepper, lbs.	18,549,875	16,847,500
Perfumery, cosmetics, etc.	$697,143	$778,495
Phosphate, crude, tons	117,231	125,531
Other fertilizers	$1,239,787	$2,157,210
Plumbago, tons	16,206	15,102
Potash, chlorate of, lbs.	1,113,371	489,098
Potash, muriate of, lbs.	103,561,092	156,035,891
Potash, nitrate of, or saltpeter, crude, lbs.	101,144,535	13,137,308
Potash, all other, lbs.	79,608,698	62,275,988
Quinine, all salts of, ozs.	3,074,942	2,820,607
Shellac, lbs.	9,210,076	11,167,549
Soap, fancy, perfumed and all toilet, lbs.	920,595	979,480
Soap, all others	$393,349	$414,183
Soda, caustic, lbs.	3,042,310	2,672,408
Soda, nitrate of, tons.	189,799	246,666
Soda, sal, lbs.	3,598,262	3,227,400
Soda, ash, lbs.	25,166,410	20,137,428
Soda, other salts of, lbs.	14,626,788	13,504,395
Spirits, proof, gals.	2,051,770	2,264,861
Sponges	$535,725	$466,404
Sulphur or brimstone, crude, tons	153,870	171,265
Sulphur ore, tons	384,560	380,578
Sumac, ground, lbs.	8,651,205	13,908,852
Vanilla beans, lbs.	430,960	560,462
Zinc, in pigs, lbs.	965,403	725,212

Exports of Domestic Merchandise.

	1902	1903.
Acids	$215,138	$204,598
Acetate of lime, lbs.	55,425,688	56,667,108
Alcohol, wood, proof, gals.	811,808	836,262
Alcohol, all other, proof, gals.	280	157,686
Ashes, pot and pearl, lbs.	1,376,044	1,105,250
Baking powder, lbs.	1,146,833	957,476
Bark, and extract for tanning	$214,691	$239,857
Beeswax, lbs.	84,027	56,891
Candles, lbs.	3,756,102	5,765,112
Cement, lbs.	382,280	268,290
Copper, sulphate of, lbs.	30,133,845	18,150,224
Cork, mfrs. of	$41,875	$31,841
Cottonseed, lbs.	49,890,917	31,548,942
Dyes and dyestuffs	$539,637	$518,878
Flaxseed, bu.	3,302,200	1,024,521
Ginseng, lbs.	97,371	158,499
Glass, window	$45,937	$54,996
Glass, all other	$1,842,442	$1,813,051
Glucose or grape sugar, lbs.	98,768,970	136,808,275
Glue, lbs.	2,670,954	2,475,867
Grease and all soap stock	$2,101,621	$3,157,834
Gunpowder, lbs.	1,298,434	709,743
Hops, lbs.	6,444,014	6,381,901
Lampblack	$224,503	$270,543
Lard, lbs.	440,757,324	470,501,961
Lead, pigs, bars, etc., lbs.	6,477,380	111,269
Lime, bbls.	38,867	53,066
Matches	$52,283	$55,173
Medicines, patent or proprietary	$2,857,424	$3,182,600
Naphthas, including all lighter products, gals.	19,104,661	11,986,341
*Oil, cake, corn, lbs.	.....	4,934,270
Oil, cake, cottonseed, lbs.	945,090,751	788,675,870
Oil cake, linseed, lbs.	515,636,927	625,702,798
Oil, corn, gals.	3,324,329	3,951,487
Oil, cottonseed, gals.	29,836,451	23,877,917
Oil, fish, gals.	870,209	1,095,175
Oil, illuminating, gals.	711,129,061	625,571,480
Oil, lard, gals.	376,693	290,350
Oil, linseed, gals.	85,561	234,385
Oil, lubricating, gals.	72,943,092	86,977,622
Oil, mineral, crude, gals.	128,466,680	116,397,665
Oil, mineral, residuum, bbls.	829,952	186,609
Oil, peppermint, lbs.	19,902	22,085
Oil, other essential	$225,587	$318,219
Oil, other vegetable	$184,569	$146,085
Oil, other animal, gals.	164,244	181,633
Oil, whale, gals.	27,748	13,989
Oleo oil, lbs.	99,498,527	139,190,556
Oleomargarine, lbs.	5,710,061	6,925,045
Paints and colors	$2,016,230	$2,361,941
Paraffine wax, lbs.	155,234,414	188,006,669
Perfumery and cosmetics	$324,296	$423,033
Phosphate, crude, tons	758,687	720,161
Other fertilizers	15,889	19,908
Quicksilver, lbs.	942,980	1,280,298
Rosin, lbs.	2,430,747	2,356,077
Roots, herbs and barks, n. e. s.	$278,458	$260,804
Soap, toilet or fancy	$472,044	$576,270
Soap, all other, lbs.	32,618,185	44,623,262
Spermaceti, lbs.	268,508	158,903
Spirits turpentine, gals	16,825,981	13,659,763
Starch, lbs.	18,391,004	40,308,076
Tallow, lbs.	15,434,469	53,885,389
Tar, lbs.	19,812	17,770
Turpentine and pitch, bbls.	16,195	15,190
Varnish, gals.	579,215	644,123
Washing powders	$4,624,589	$6,456,566
Whalebone, lbs.	109,147	54,243
Zinc, oxide of, lbs.	9,923,359	18,106,669

*Not included prior to July 1, 1903.

Application of the Manganimetric Method to the Analysis of Industrial and Commercial Glycerines.

(From the French of Prof. J. Gallhat in the Moniteur Scientifique.)

We have recently introduced in the manganimetric method a modification which we have applied to the analysis of glycerine, whether in products more or less refined, constituting the industrial or commercial glycerines, or in the industrial residues from which the latter are derived. The methods previously proposed for the same purpose are numerous, and in making known the results of our researches in this subject, we are persuaded that these methods do not present all the guarantees of precision desirable, even for commercial tests. The principal processes hitherto employed may be classed as follows:—(a) method by direct extraction; (b) methods by etherification; (c) methods by oxidation.

A. Method by Direct Extraction.—This method, to which most standard treatises seem to give the preference, consists in separating the glycerine from the accompanying impurities by means of a mixture of ether and alcohol, which is supposed to dissolve only the glycerine, to the exclusion of other substances. The solution obtained is filtered, then concentrated to a constant weight, either on the water bath, or in vacuum over concentrated sulphuric acid. The residue is then weighed. Afterward, it is calcined and the weight of the ash deducted from the total weight previously obtained. The difference is considered as representing the pure glycerine contained in the sample. There are various causes of error:—(1) The alcohol-ether mixture dissolves, under the same conditions as the glycerine, fixed substances which disappear by calcination; (2) The glycerine is not absolutely fixed at 110 degs. C.; (3) In vacuo it never loses all its hydrating water, retaining at least 1.52 per cent.

B. Methods by Etherification. 1.—The first to be noticed, due to Champion Pellet, rests on the conversion of the glycerine into nitro-glycerine, and the weight of the latter after washing and desiccation.

Besides the danger incurred by the operation, the yield is far from being constant, and the losses by dissolution or effusion at the time of the washing of the nitro glycerine are not negligible.

2.—The second of these methods by etherification, the acetine method of Benedikt and Cantor, is based on the action of acetic anhydride on glycerine at the boiling point, and the production of triacetine under these conditions. When the reaction is terminated, the ether formed is dissolved in hot water. The anhydride excess thus passes to the state of acid, which is neutralized exactly by means of a caustic alkaline solution. The triacetine is afterward saponified with a known excess of standardized alkaline liquor. It remains to determine the portion of this alkali remaining free, and by difference that which corresponds to the etherified glycerine, whence is deduced the glycerine itself.

This method, elegant in theory, is practically very difficult. It also necessitates operating on substances as slightly hydrated as possible, and is subject to pronounced causes of error. (1) It is admitted that the etherification is complete after an hour and a half of boiling, accompanied with a return condenser. Nothing indicates the amount when the object is really attained; this first phase of the operation, a fundamental phase, has no possible criterion, unless the richness of the product is known in advance. (2) The ether formed is dissolved in hot water, a very difficult operation; and yet it is not certain to have saponified a portion, so weak is the ether itself. (3) The excess of acid is neutralized by a caustic alkali, another much more important cause of saponification. (4) Finally, the action is direct on the crude products, and account is not taken of the aldehydic or other impurities, of the acrolein especially, on which the anhydrides of the acids act.

These considerations have led chemists to express differing opinions on the value of this process. While Hehner and Leukowitsch consider it excellent; Filsinger and others maintain that they have otained only discordant results.

C. Methods by Oxidation.—These methods, the most numerous, may be sub-divided into two principal classes; (1) those in which the oxidation is not complete; (2) those in which the oxidation is complete.

Among the first is (1) the method of Benedikt and Zsigmondy, in which the glycerine is oxidized by alkaline MnO^4K and converted into oxalic acid, which is ulteriorly separated in the form of oxalate of lime. Unfortunately, the number of substances capable of yielding oxalic acid under these conditions is much too large to allow of confidence in this process, except when the solutions of glycerine are absolutely pure.

2.—Laborde's method is applied by its author to the determination of glycerine in fermented liquids. This process requires the previous extraction of the glycerine by means of the alcohol-ether mixture, then its partial oxidation with sulphuric acid diluted with about a third of its volume of water, at a temperature not exceeding 200 degs. C. Under these conditions the glycerine is decomposed according to the equation $C^3H^8O^3+SO^4H^2=C^3+SO^3+5H^2O$. Here it is the carbon which is first recovered with chlorhydric acid, then with distilled water, and afterward decanted on filter and washed. The filter is perforated, and the carbon washed into platinum dish, neutralized with a few cubic centimeters

of ammonia evaporated in the stove at 110 degs. C., and the operation ended over the flame of a gas burner, at about the temperature of the red, in order to drive off the ammoniacal salts. The carbon obtained is then weighed, if it has not been ignited notwithstanding all precautions, which too often happens, at least in inexperienced hands. Even when the test appears to have been well conducted, the precision of the method leaves much to be desired.

In the methods for complete oxidation the oxidizing mixture is sometimes formed of MnO^4K, and sometimes of $Cr^2O^7K^2$ in strong sulphuric solutions.* It is admitted that at the boiling point, or at a temperature near it (some operators simply make use of the water bath), the glycerine is wholly converted into CO^2 and H^2O, according to the equation $C^3H^8O^3+O^7=3CO^2+4H^2O$. The principal of these methods, all of which have been subjected to modification in detail, are:—

1. That of Planchon, which utilizes MnO^4K, and weighs the carbonic acid gas disengaged after desiccation and absorption in potash and soda lime tubes, according to the ordinary rules of organic analysis.

2. That of Cros and Brevan or of Gaulter, who operate in the same way, but employing $Cr^2O^7K^2$ as an oxidant.

3. The method of Hehner, which appears at present to enjoy the greater confidence of industrial chemists. In this, the operation is conducted chromo-metrically, with an excess of titrated liquor $Cr^2O^7K^2$, of which the richness is determined by means of a standard solution of ferroso-ammoniacal sulphate. The term of the reaction appears from the blue color given by a drop of the mixture deposited on fragments of potassium ferricyanide in porcelain dishes. After the oxidation of a given quantity of the glycerine solution, the excess of oxygen disposable in the oxidizing liquor is also titrated, and from the difference the percentage of glycerine is deduced.

Like the two preceding, this method takes for granted that the oxidation is complete at the temperature of the water bath. We have convinced ourselves that this is inexact, and will show later that it is indispensable to keep up the boiling for at least twenty or twenty-five minutes, taking care to condense, by means of a return condenser, the reducing vapors, consisting principally of formol and formic acid, which always arise in the first minutes of the reaction, and which would be in part lost without this precaution.

Many other processes, based on different principles, have also been proposed. We will not recount them here, but will pass on to the study of a method, originated by us, resting also on the complete oxidation under determined conditions of the glycerine solution by a mangano-manganic mixture. We will divide the subject under two principal heads. The first will treat of the analysis of solutions of pure glycerine; the second of the application of the process to the more general case of crude glycerines and solutions more or less contaminated with impurities.

I.—ANALYSIS OF THE SOLUTIONS OF PURE GLYCERINES.

Preparation of the Pure Glycerine Solutions.—The glycerines found in commerce under the name of official glycerine or even of chemically pure glycerine still very often contain some impurities which are very difficult to remove entirely. These are especially fatty acids, drawn over by the steam at the time of the distillation in vacuo, an operation for which it is indispensible to acidulate the crude glycerines, if they are not already sufficiently acid. Without this precaution frothing and projection out of the vessel would occur which would contaminate the distilled product and might necessitate arresting the operation completely. Traces of mineral salts are also found in them, proceeding partly from the projection to which we have referred, but especially in glycerine well distilled, from the cyanide black which has been made use of to decolor them.

It is true that by a new distillation almost all of the mineral salts can be got rid of, but it is impossible by this means to free them from the last traces of the volatile fatty acids, which are always found in distilled glycerines. Such glycerines, containing as much as 0.2 per cent. and even 0.3 per cent. of volatile acidity, expressed in sulphuric acid, are often found.

Now, admitting that a solution of chemically pure glycerine can be obtained, the recent experiments of Struve show how doubtful is the possibility of securing a strictly exact weight of the anhydrous glycerine. Struve has shown (1) that the hydrated glycerine parts only with extreme difficulty with all its hydrating water, and that even after having been long submitted to the action of the vacuum it contains at least 1.52 per cent. of water; (2) that the glycerine thus concentrated is very hydroscopic and recovers in the air as much as 17.46 per cent. of moisture. These facts render too doubtful the direct weighing of the glycerine of the samples claimed as absolutely pure. We have tried to overcome the difficulty in a different way.

We have taken glycerine distilled by steam in vacuo, proceeding from an operation well conducted. Redistilled by ourselves, this product contained only traces of fatty acids. We have washed it by successive decantations in such a way as to draw off the fatty substances; then have diluted it with four volumes of distilled water. The solution thus obtained has been treated with cyanide black and filtered. The cyanide black had been itself washed with nitric acid three separate times, exhausted with distilled water and calcined at a red heat.

The glycerine has been afterward concentrated on the water bath, diluted anew with four volumes of water, and reconcentrated to drive off, with the ether, the last traces of fatty acids. The concentration has been stopped when the density of the product corresponded to a richness of about 80 or 82 per cent. of pure glycerine. Thus we have a diluted glycerine, which we may consider as quite pure, and which does not incur the risk of hydration at the time of weighing. Its real richness remains to be determined.

The density at 15 deg. C was: (1) 1.223; (2) 1.2222; (3) 1.2222; which, according to the Lenz tables, corresponds to 82.6 of glycerine. To verify this percentage we have effected two elementary analyses of the same product, yielding the following results:

	1.	2.
Sample (gr.)	0.5330	0.4068
CO^2 collected	0.6262	0.4742
H^2O collected	0.04433	0.33381
CO^2 which would have been disengaged, allowing the percentage deduced from the density as exact	0.631	0.4816
H^2O which would have been disengaged under the same conditions	0.4374	0.3338

From this it is seen that the determination of the density at 15 deg. C. of a given glycerine is sufficient to fix its percentage, if the purity of the product is assured. The following table gives, according to Lenz, the percentage of aqueous solutions of glycerine corresponding to their density at 15 deg. C.

$C^3H^8O^3$%.	Density.	$C^3H^8O^3$%.	Density.
70	1.1889	88	1.2372
75	1.2016	90	1.2425
78	1.2106	92	1.2478
80	1.2159	94	1.2531
82	1.2212	96	1.2584
84	1.2265	98	1.2637
86	1.2318	100	1.2691

If the curve of the densities corresponding to the percentages between 1.21 and 1.2691 for the temperature at 15 degs. C. is constructed, taking the percentages as abscissas and the densities as ordinates, it is found that between these limits the curve becomes a straight line.

According to Lenz, we have for the same difference of percentages, the same difference of densities:—

100....1.2691	92....1.2478	88....1.2372
92....1.2478	84....1.2265	80....1.2159
8....0.0213	8....0.0213	8....0.0213

of which the ratio is $\frac{8}{0.0213}=100\times3.75$.

Between 78 and 81.5 we have, according to the table,

$$\left.\begin{array}{l} 81.5.....1.2198 \\ 78\ .....1.2106 \\ \hline 3.5.....0.0092 \end{array}\right\} \text{whence } \frac{3.5}{0.0092}=100\times3.80.$$

Between the limits of the percentages 78 and 100, we can take this ratio as equal to the average value 100×3.77, whence for a percentage T, of density d, we will have $\frac{T-78}{d-1.2106}=100\times3.77$, which will give the percentage by the formula $T=78+3.77\ (100d-121.06)$. If we compare the calculated numbers by this formula with those which are represented on the diagram, carefully traced, we will have

Baume.	Density.	Calculated.	Found.
25°	1.2095	77.60	77.75
26	1.2198	81.47	81.5
27	1.2301	85.25	85.03
—	1.2318	85.99	86.0
28	1.2407	89.35	89.3
29	1.2515	93.42	93.4
30	1.2624	96.58	97.56

The formula (1) will lead inversely to the density which a solution should have to respond to a given percentage above 78. We thus obtain (2) $d=1.2106+0.00265\ (T-78)$. Example: for T=90 we have, calculated, 1.2424; according to Lenz, 1.2425. The formulas dispense with the need of having recourse to tables of percentages varying from 78 to 100 at 15 degs. C.

Formula 1 gives the percentage in pure glycerine for glycerines of which the density is between 1.21 and 1.2691. It is glycerine, thus purified and titrated, that we have made use of in all the experiments mentioned as conducted with pure glycerine.

Action of the Mangano-manganic Mixture on Solutions of Pure Glycerine.* When we mix 50 cubic centimeters of MnO^4K in solution of about 15 grams per liter; 25 c.c. of SO^4Mn (15 per cent); 25 c.c. of glycerine solution (about 6 grams per liter); and 25 c.c. of pure and concentrated SO^4H^2; and heat the whole with precaution, we find that the reaction commences in advance of the boiling point and is manifested by a gaseous disengagement, the greater as this temperature is approached.

But if we take care to connect the receiver with an ordinary condenser, in order to condense the vapors produced, we have the following facts:—(1) the distillate is slightly acid; (2) it reduces acid nitrate of silver; (3) it reduces the Tollens reagent (soda-ammoniacal nitrate of silver); (4) it reduces the Nessler reagent; (5) it recolors bisulphited fuchsine; (6) it gives the Trillat reaction characteristic of formol.

Five drops of this distillate, taken five or six minutes after the commencement of the distillation, are yet sufficient to color 2 c.c. of the fuchsine reagent an intense rose color. Reducing substances are therefore disengaged, among which are formol and formic acid.*

If now we resume the experiment, first connecting the receiver with an upright condenser for at least fifteen minutes, counting from the commencement of the ebullition, and afterward distill as previously, we will have a distillate which will no longer present any of the reactions noticed above. But these facts are reproduced when we substitute MnO^4K without SO^4Mn, or even CrO^7K^2, for our mangano-manganic mixture. With the dichromate in particular, if the percentage of SO^4H^2 has been increased up to 40 per cent. left or not on the water bath, and the operative mode been modified according to the indications of Hehner, or those of Richardson and Jaffe, we always have noticed especially a disengagement of aldehyde. It is then quite certain that the oxidation cannot be complete, if care has not been taken to condense the first vapors and cause them to remain in action. This is not sufficient, however, to demonstrate that the glycerine has been converted wholly into carbonic gas and water, even after boiling for 20 or 25 minutes, with condensation by a return condenser.

We have then verified, operating with the mangano-manganic mixture, and taking the full precautions mentioned above, that on one hand, the quantity of carbonic gas disengaged, and on the other, that of the oxygen absorbed during the reaction, should respond to the equation $C^3H^8O^3+O^7=3CO^2+4H^2O$.

Determination of the Carbonic Gas Produced.—In order to estimate the CO^2 disengaged, we have operated by weighing, after desiccation over SO^4H^2 and absorption in potash and soda lime tubes, as is practised in organic analysis. This process, it must be said, has given but mediocre results, and this may be explained. The volume of the reaction receiver, and that of the return condenser in front of the sulphuric pounce tubes, require the prolonged passage of a current of air free from carbonic acid, in order to insure the complete expulsion of the CO^2 gas produced. The dilution renders the absorption of the last traces of this gas quite difficult. The number of the sulphuric pounce tubes should be increased. We have made use of but two for dehydrating, notwithstanding the condensation produced by the condenser such a gaseous mass saturated with vapor.

We have thus obtained an approximation varying from 1 to 3% from the theoretic results. This was not sufficiently exact. We then replaced the volumetric method by absorbing the carbonic gas in standardized baryta water, with a Meyer tube of six bulbs, followed with a Durand flask graduated to 55 cubic centimeters. 100 cc. of the saturated baryta water were distributed between the tube and the flask. When the absorption was terminated all the baryta liquid was passed into the last, by simply inclining the Meyer tube, which was connected with the graduated flask by means of a rubber tube. The Meyer tube was washed without detaching it three or four times; and the wash-waters with the baryta water collected, which thus reached a volume of 500 cc. On the other hand, 100 cc. of the same baryta water were diluted up to 500 cc., avoiding carbonization by the air. The two liquids shaken smartly were then left at repose until perfect clarification of the liquor floating on the top of the CO^2Ba in the first flask. 100 cc. of each liquid were then titrated acidimetrically, and the difference corresponds to a fifth of the gas CO^2 disengaged during the reaction.

These are the results of four experiments, each performed on 25 cc. of solution, containing 5.257 per liter of pure glycerine considered in the anhydrous state:—

		I. cc.	II. cc.	III. cc.	IV. cc.
Percent $SO^4H^2N/10$ in 100 cc. baryta water diluted to ⅓		57.0	57.0	56.95	57.05
Percent $SO^4H^2N/10$ in 100 cc. baryta water diluted to ⅓ after absorption of CO^2	1.	39.7	39.9	39.8	39 9
	2.	39.7	39.8	39.7	39.8
	3.	39.8	39.9	39.7	39.7

Average: CO^2 collected=(57—39.783)×0.0022=0.1894 gr. instead of CO^2 calculated=1/40×5.257×1.4348=0.1886 gr.

Determination of the Oxygen Absorbed.—In three Erlenmeyer flasks were mixed respectively: 50 cc. of MnO^4K (15 grams per liter); 25 c.c. SO^4Mn (15%); and 20 c.c. pure SO^4H^2. The whole was kept at boiling point for five minutes, after having placed over each flask an Allyn condenser.

One of the three mixtures, cooled to the temperature of 45-50 deg. C. was then titrated by adding 50 c.c. of oxalic acid N/2, which is always sufficient to produce the decoloration of the liquor; then drop by drop chameleon N/10 up to a persistent rose coloration. In each of the two other flasks, 25 c.c. of pure glycerine in solution (5.9918 gr.) were introduced per liter and the boiling continued, connected with return condenser, for 25 minutes. Numerous experiments have shown us that this period is always sufficient, if the percentage of glycerine introduced is such that there remains at least one-tenth of active oxygen in the mixture after the reaction. For this it is necessary that the glycerine solution should not contain more than about 5.9 gr. of the anhydrous substance per liter. The boiling was stopped, and the mixture left to cool to 45 deg. C., adding 10 c.c. of oxalic acid N/2, then drop by drop MnO^4K (N/10) up to coloration.

These are the results obtained by two series of experiments thus conducted:—

	I. cc.	II. cc.	III. cc.	IV. cc.	V. cc.	VI. cc.
Solution of glycerine (5.9918 gr. per liter)	—	25	25	—	25	25
Oxalic acid N/2 added	50	10	10	50	10	10
$MnO^4KN/10$ nec'y for coloration	4.1	31.6	31.8	4	31.5	31.6

From the average of tests I and IV is deduced the active oxygen free before the introduction of the glycerine, counted as $MnO^4KN/10=50$ c.c.x5—4.05 c.c.=245.95 c.c.

From the average of the four other tests is deducted in a similar way the active oxygen remaining disposable after the oxidation of 25 c.c. of the glycerine solution=18.375 c.c. N/10; whence the oxygen absorbed=227.575 c.c. N/10. From the equation of the oxidation presented above we have 1 c.c. $N/10=\frac{1}{10}\times\frac{92}{14}\times\frac{1}{1000}=0.000657$ gr. of glycerine; whence we have glycerine contained in the 25 c.c. of the solution oxidized=$227.575\times0.000657=0.14954$ gr. and glycerine per liter=$0.14954\times40=5.9816$ gr. instead of 5.9918 gr.

But, although we know that the mangano-manganic mixture loses traces of oxygen at the beginning of the boiling, a consideration which has compelled us to take the percentage of the mixture only after fifteen minutes of boiling, it is natural to suppose that the same loss would not continue in presence of so energetic a reducer as glycerine, under the conditions of the experi-

*To aid manufacturers not familiar with chemical notation in better understanding the constitution and action of these mixtures, it may be well to give the compounds for which symbols are employed in the text. MnO^4K is potassium permanganate. So^4Mn, manganese sulphate; $Gr^2O^7K^2$, potassium dichromate (double chromate); SO^4H^2, sulphuric acid (oil of vitroil); Co^2, carbonic acid gas; and HO^2, water. Chameleon is a compound of potassium manganate, so-called because, when dissolved and decomposed, it changes successively from one color to another.—Note by Translator.

*We recall the fact that this mixture is obtained by adding to the standardized solution of chameleon a slight excess of SO^4Mn, acidulated with 1 or 2 per cent. of SO^4H^2.

*Perdrix has also ascertained the formation of formic acid.

ment. To verify this, we added 25 c.c. of the glycerine solution to the mixture without previous boiling, after simply standardizing the chameleon employed at the temperature of 45 deg. C. We still obtained results as follows:

	I. cc.	II. cc.	III. cc.	IV. cc.	V. cc.	VI. cc.	VII. cc.
MnO^4K (15 gr. per liter).....	50	50	50	50	50	50	50
Solution of glycerine	—	25	25	25	25	25	25
Oxalic acid....	50	10	10	10	10	10	10
MnO^4K N/10 necessary for coloration ...	2.6	30.1	30	30.4	30.1	30.2	30

whence we derive as before, oxygen absorbed=227.567 cc. N/10, and glycerine per liter=5.9804. The manual operation may, therefore, be much simplified, as we will show further on, which we have done for the later experiments, yielding results perfectly theoretical.

It is indispensable, in order to obtain a distinct concordance with the results, to prepare the liquors of oxalic acid, chameleon and glycerine with water at a temperature absolutely constant, and to never employ them without being assured that they are at the same temperature. Without this precaution there will be material deviations. It may be comprehended that the oxidation of a molecule, or 92 grams of glycerine, requiring seven atoms of oxygen, that is to say, 28000 cc. of chameleon N/2, the least error in the composition of this liquid will occasion differences which cannot be neglected.

Of all these causes of error the most important is that which is occasioned by the variatioons in the volume of the liquids due to the changes of temperature. This fact already noticed by Hehner in his chromometric method, led him to determine the co-efficient of dilatation of the solutions of $Cr^2O^7K^2$, which he employed and to make the necessary corrections by calculation. The method does not appear to us practical for an industrial laboratory. We much prefer a comparative method, utilizing two solutions made at the same time and at the same temperature, one with a standard glycerine of known richness, the other with the product to be analyzed. These two solutions ought to contain essentially the same percentage of pure glycerine, always about 5.9 gr. per liter.

It will not then be necessary to preserve for the liquors of oxalic acid and of chameleon a strict percentage, and it will be sufficient to compare them carefully together before each series of experiments in order to be assured of perfect precision. In other words, the standard to which the results are to be referred will be the solution of pure glycerine, which will be quite easy to prepare. For this purpose we take a pure official glycerine, or else a distilled glycerine and purify it. This can be preserved without fear of variation in its percentage after having diluted or concentrated it, according to circumstances, until its density is about 1.22 at 15 deg. C. From this density can be deduced, by means of the table already given, the exact richness of the product obtained. For greater surety this percentage may be checked by effecting a comparative determination with a solution of very pure and dry oxalic acid, to be prepared at the same time as the solution of the glycerine in question.

Analysis of Officinal Glycerines.—According to all of these data, the determination of any officinal glycerine may be conveniently realized in the following way:—On one hand we take a percentage of standard glycerine, corresponding to about 5.9 gr. of anhydrous glycerine, and dilute it to 1000 cc. Let Q be the quantity of anhydrous glycerine in solution. We operate in the same way with the glycerine to be analyzed. Call P the crude weight of this glycerine dissolved, and X the quantity of anhydrous glycerine corresponding. On the other hand, we prepare three oxidizing mixtures, each having 50 cc. of MnO^4K (15 gr. per liter); 25 cc. SO^4Mn (15 per cent.); and 20 cc. of pure SO^4H^2. One is to be titrated immediately at the temperature of 45 deg. C. with 50 cc. of oxalic acid N/2; then drop by drop MnO^4K N/10 titrated to change of color. To one of the two others are to be added 25 cc. of the solution of standard glycerine, and finally to the third 25 cc. of the solution to be tested. The two last mentioned mixtures are to be carried to the boiling point, following the prescriptions which have been given, for at least twenty-five minutes; then titrated as already mentioned.

Let A be the quantity of oxygen, expressed for example in cubic centimeters of chameleon N/10 absorbed by the standard solution; and B, that which the solution to be analyzed absorbs. We have $\frac{X}{2}=\frac{B}{A}$; whence $X=2\times\frac{B}{A}$; and percentage of glycerine in the samples analyzed $=\frac{\frac{B}{-}\times 100\times 2\times A}{P}$

Thus is resolved, with a precision hitherto unknown, we believe, the question of the analysis of glycerine in solutions not containing any other reducing substance. This method has always enabled us to reach an exact result, at least within about 0.25 per cent.

We ought, however, to say that the chronometric method, applied with the same precautions and in an identical manner, will allow of reaching a result nearly as exact. Its inconveniences are: (1) the want of sensitiveness inherent to a tentative titration; (2) the intense green coloration of the solutions of the chromic salt, resulting from the reduction of the $Cr^2O^7K^2$, which necessitates diluting these liquids after the oxidation of the glycerine, and in performing the final titration only a fraction of the latter.

II.—ANALYSES OF CRUDE GLYCERINES.

According to their origin and the modes of treatment to which they are subjected, industrial solutions furnish, on concentration, crude glycerines of quite varying qualities. The operation which gives them birth, the saponification of the fats, can, as known, be effected in various ways, of which the principal are: (1) saponification with steam; (2) with lime; (3) with sulphuric acid; (4) with alkalies at the time of the manufacture of the soaps.

The first two, the saponification with steam and with lime, furnish the purest and most valued glycerines. With sulphuric acid much less purer products are obtained, but the lyes of the soap works furnish the most contaminated glycerines. The two latter especially demand our attention. A short time ago the soap works made use only of the Leblanc soda, and were obliged, in order to obtain merchantable glycerines, to treat their solutions with a slight excess of chlorhydric or sulphuric acid, so as to drive off before concentration the sulphurated products introduced by the alkali. The presence of these products to any marked extent is quite injurious to distillation, and sufficient to proscribe their use. The importance of their perfect expulsion by oxidation either by a current of air or by the addition of chloride of lime is generally understood. But since the adoption in soap works of purer sodas, free from sulphurated derivatives, many lyes have been concentrated without ulterior treatment, which is far from being an advantage. Without reference to these, the mineral acids would occasion the decomposition of the soaps remaining dissolved, and the separation of the greater part of the insoluble or volatile acids which remain when the concentration is operated in an alkaline medium. It may be added, however, that the tendency against this way of operating is increasing, and that the best regulated soap works operate in the two following phases: (1) the degycerination of the fats, and (2) the saponification, rendered extremely easy, of the fatty acids obtained by the first operation.

What, then, are the most frequent impurities and those most to be dreaded for analysis in the glycerine of the soap works

It may be stated that among the mineral matters the most troublesome is sodium chloride. It is still met with, along with sulphuric acid, and traces of lime, magnesia, iron, alumina, etc.; but we have seen that reducing sulphur products are met with only in insignificant quantities.

On the other hand, the organic impurities are numerous and varied. These are, especially, soaps or fatty acids not separated from albuminoid matters, sometimes resinous substances, and products of decomposition, as well as derivatives of glycerine itself.

It is, therefore, impossible to find a reagent which can entirely purify such a mixture; and oftentimes the treatment adopted is with subacetate of lead, accompanied or not with precipitation by means of oxide of silver or a salt of this metal. It is to this treatment that we have recourse.

We employ silver nitrate in quantity slightly above that which a complete precipitation of the sodium chloride requires, and a slight excess of subacetate of lead. These two reagents, as we will show, are without action on the mangano-manganic mixture, and there is no inconvenience in making use of them.

The impurities of pure crude glycerine may be assigned to three classes; (1) those which are precipitated completely by the salts of lead or of silver; (2) those which are not at all thus precipitated; (3) those which are partially precipitated. Whatever their nature, no consideration need be given to the first after clarification. There are some resinous or fatty acids which may be regarded as precipitated completely in the form of insoluble soaps of lead or silver, especially sodium chloride.

Now, if it is considered that this chloride is to be found in the proportion of ten per cent. in certain glycerines of the soap factories, and that, according to the formula of oxidation of the corresponding chlorhydric acid, $2HCl+O=H^2O+Cl^2$, a molecule of NaCl, or 58.5, requires as much oxygen as one-fourteenth of a molecule of glycerine; that is, 6.571; it may be seen that its action is not negligible, as Richardson and Jaffe suppose, since it may theoretically occasion an error greater than one per cent. in the glycerines considered.

Of all the impurities not precipitable under our conditions, the most important are certainly the volatile fatty acids inferior to caprylic acid.

Among those which are but partially precipitable may be mentioned albuminoid substances, certain fatty acids or soaps, aldehydes, etc., which, in the majority of cases, will be only imperfectly eliminated, and it is essentially impossible to entirely avoid their disturbing action in the analysis of the glycerine. Let us see how far it is possible to obviate this action for the latter categories mentioned.

Volatile Fatty Acids of the Soapworks Glycerines.—Ordinarily the volatile acidity, expressed in SO^4H^2, of the glycerines proceeding from concentrated solutions in alkaline media, is about 1 per cent., but may reach and even exceed 2 per cent.

For the researches to be mentioned we have extracted from an average sample of several of these glycerines the acids which can be drawn off by steam in acidulated medium, 5 per cent. of SO^4H^2 diluted with 50 per cent. of distilled water. Three successive samples of 25 kilograms have each yielded a distillate, whence we have drawn about 500 grams of volatile acids. These acids have been isolated and purified by the Chevreuil method, then rectified separately by distillation in vacuum with the Henninger apparatus.

We have collected (1) a first fraction distilling under 40 deg. at a pressure of 20 mm.; (2) and an acid distilling at 78 to 80 deg.; (3) an acid distilling at 125 to 127 deg.; (4) an acid distilling at 147 to 149 deg. The first fraction, too small to be rectified again, was a mixture of acetic and butyric acids, with traces of formic acid, only revealed by acid nitrate of silver; the secoond consisted of butyric acid; the third of caproic acid, and the fourth of caprylic acid. The last three have been obtained in much greater purity. The volatile acids superior to caprylic acid constituting but an insignificant residue, as compared with the mass of the glycerine treated, have been neglected. Besides, we see that caprylic acid furnishes a lead soap nearly insoluble, and it is known that most of the superior fatty acids behave in the same manner.

It has also been impossible to isolate the intermediary acids from those which we have noticed, and if they exist in certain glycerines it can be but rarely or in negligible quantities.

Identification of the Volatile Fatty Acids.—We have identified the above acids in the following way:—

A.—Acids distilling below 40 deg. C. under a pressure of 20 mm. of mercury.—After making a dilute solution of these acids we have taken 110 cc. of the liquor and treated it by the Duclaux method. Fractionations on portions of 10 cc. have yielded:—Total volatile acidity introduced in the distilling vessel (A. V. T. I.*)=49 cc. of lime water, of which 23.8 cc. correspond to 10 cc. SO^4N^2 N/10; total volatile acidity distilled (A. V. T. D.*) in the first ten portions=40.1 cc. of lime water.

The following table gives the partial volatile acidities distilled (A. V. P.*) in each of the ten fractions considered and also the value of the ratios:—

*These letters are the initials of the French words:—A. V. T. I., Acidite Volatile Totale Introduite ("total volatile acidity introduced"); A. V. T. D., Acidite Colatite Totale Distille ("total volatile acidity distilled"); A. V. P., Acidites Volatiles Partilles ("partial volatile acidities distilled").—Trans.

$$\frac{\text{A. V. P.}}{\text{A. V. T. I.}}\times 100$$

No. of fraction.	A. V. P. expressed in lime water.	Ratio 100 A. V. P. / A. V. T. I.
I.	3.7	7.5
II.	3.7	7.5
III.	3.6	7.3
IV.	3.7	7.5
V.	3.7	7.5
VI.	3.8	7.7
VII.	3.9	7.9
VIII.	4.1	8.3
IX.	4.6	9.3
X.	5.3	10.8.

This table shows us the certain presence of acetic acid on account of the absence of formic acid by the characteristic increase of the last fractions distilled, but this acid can be rendered manifest in a more decided way. In view of the property which the superior volatile acids have in dilute solution of almost totally passing over in the distillation in the first ten-elevenths of the distillate, and of the fact that there remains in the last about one-fifth of the acetic acid introduced, it was easy to isolate this acid. We, therefore, made a solution a little more concentrated than before and distilled 110 cc., collecting only 100 cc. of distillate. The remainder was diluted up to 125 cc., of which 10 cc. served for the titration and 110 c.c. for fractionating as usual. We obtained:—

A. V. T. I.=72 cc. of lime water; A. V. T. D.=57 cc. of same.

Fractions.	A.V.P. in lime water.	K: 100 A.V.P. / A.V.T.I.	Values in acetic acid.
I.	4.7 cc.	6.5	5.9
II.	4.8 "	6.57	6.3
III.	4.7 "	6.81	6.5
IV.	5 "	6.95	6.9
V.	5.3 "	7.37	7.1
VI.	5.5 "	7.64	7.7
VII.	5.8 "	8.06	8.3
VIII.	6.2 "	8.62	8.8
IX.	6.8 "	9.45	10
X.	8 "	11.12	12.5

As seen, the results are extremely distinct, and the theoretical consideration of these results, according to the Duclaux rules, demonstrates that the fraction studied contains only butyric acid with acetic acid. We confine ourselves for the moment to noticing the fact, without entering into the discussion, which would lead too far from the subject in hand.

B.—Acid distilling at 78-80 deg. C. under a pressure of 20 mm. 110 cc. of the dilute solution of this acid treated in the same way yielded:—

A. V. T. I.=50.5 cc. of lime water; A. V. T. D.=47.7 cc. lime water.

Fractions.	A.V.P. in lime water.	K: 100 A.V.P. / A.V.T.D.	Values in butyric acid.
I.	9.2 cc.	18.2	17.6
II.	7.7 "	15.2	15.6
III.	6.6 "	13.1	13.5
IV.	5.6 "	11.1	11.7
V.			
VI.	4 "	7.9	8.7
VII.	3.3 "	6.5	6.8
VIII.	2.7 "	5.3	5.5
IX.	2.1 "	4.2	4
X.	1.7 "	3.4	3.4

This shows us, therefore, the almost exclusive presence of butyric acid in the fraction considered, a result confirmed distinctly by the two following acidimetric tests:—(1) 0.172 gr. of this acid required for perfect neutralization 46.9 cc. of lime water of the same strength as before; therefore, $46.9\times 0.42=19.698$ c.c. N/10, and the corresponding butyric acid$=19.698\times 0.0088=0.1733$ gr. (2) A second sample of 0.1851 gr., treated in the same way, required 50.7 cc. of lime water; $50.7\times .42=21.294$ cc. N/10, and corresponding butyric acid$=21.294\times 0.0088=0.187$ gr.

C.—Acid distilling at 123-127 C., under a pressure of 20 mm. Operating as before, we obtained with 110 cc. of dilute solution of this acid:—

A. V. T. I.=50 cc. lime water; A. V. T. D.=49.9 cc. lime water.

Fractions.	A.V.P. in. lime water.	K: 100 A.V.P. / A.V.T.	Values in caproic acid.
I.	15.7 cc.	31.4	33.5
II.	11.7 "	23.4	25.4
III.	8.2 "	16.4	16.3
IV.	5.7 "	11.4	10.5
V.	3.7 "	7.4	6.5
VI.	2.2 "	4.4	4
VII.	1.3 "	2.6	1.7
VIII.	0.7 "	2.4	0.9
IX.	0.4 "	0.8	0.7
X.	0.3 "	0.6	0.5

This table shows us the presence of nearly pure caproic acid, but it is well to remark that for this acid, and especially for the following, the Duclaux method is a little defective in consequence of the insolubility of these acids in the first fractions distilled. This insolubility causing in the condenser the separation of small drops of acid not carried over with the corresponding fraction may give rise to experimental errors sometimes quite noticeable.

So the following acidimetric tests

have been much more distinct:—(1) 0.2143 of the acid considered has saturated 43.64 cc. of lime water; 43.64×0.42=18.328 cc. N/10; whence the caproic acid corresponding=18.328×0.0116=0.2126 gr. (2) 0.1836 saturated 37.5 cc. of lime water; 37.5×0.42=15.75 c.c. N/10; whence the caproic acid corresponding=15.75×0.0116=0.1827 gr.

D.—Acid distilling at 147-149 deg. C., under pressure of 20 mm. of mercury. This acid melted at + 15 deg. and congealed very readily at + 15 deg. In saturated solution 110 c.c., corresponding only to 16 c.c. of lime water, yielded by the Duclaux method:—

A. V. T. I.=16 cc. lime water; A. V. T. D.=15.9 cc. lime water.

Fractions.	A.V.P. in K: lime water.	100 A.V.P. / A.V.T.	Values in caprylic acid.
I.	6.5 cc.	40.6	55.5
II.	4.2 "	26.7	22.5
III.	2.2 "	14	13
IV.	1.3 "	8.3	2
V.	0.7 "	4.4	2
VI.	0.3 "	1.9	1.8
VII.	0.3 "	1.9	1
VIII.	0.2 "	1.3	1.2
IX.	0.1 "	0.6	0.5
X.	0.1 "	0.6	0.5

Acidimetric tests:—(1) 0.1972 gr. saturated 32.4 cc. lime water; 32.4×.042=13.608 cc. N/10; whence the caprylic acid corresponding=13.608×0.0144=0.1959 gr. (2) 0.2064 gr. saturated 34.1 cc. of lime water; 34.1×0.42=14.322 N/10; whence the caprylic acid corresponding =14.322×0.0144=0.2062.

Action of the Volatile Fatty Acids on the Mangano-Manganic Mixture.—All these acids being thus characterized, we have tested their reducing action on the mangano-manganic mixture, boiling except in the case of acetic acid. It is these acids derived from glycerine which we have made use of in the tests to be mentioned.

A.—Action of Crystallized Acetic Acid: 50 cc. of solution of this acid, pure (8.8 gr. per liter), added to a mixture formed of 50 c.c. MnO^4K N/10; 5 c.c. SO^4Mn; 20 c.c. SO^4H^2, pure, have caused a loss to this mixture after thirty minutes of boiling of only the quantity of active oxygen corresponding to (1) 0.6 cc. MnO^4K N/10; (2) 0.7 cc MnO^4K N/10. The same mixture, treated under the same conditioons with 50 cc. of distilled water alone, lost (1) 0.6 cc. N/10; (2) 0.5 cc. N/10.

In dilute solution acetic acid is, therefore, inactive on this mixture; yet in more concentrated solutions the loss becomes a little more noticeable and also a slight disengagement of carbonic gas may be observed. Thus, with 50 cc. of acetic solution, 88 gr. per liter, the loss of the mixture in active oxygen was, after thirty minutes of boiling, (1) 4 cc. N/10; (2) 4.1 cc. N/10. It is quite probable that this reduction is due to slight impurities in the acid employed.

B.—Action of Butyric Acid.—Even in dilute solution this acid acts more energetically on the oxidizing mixture, and gives rise to quite a noticeable disengagement of carbonic gas, which is produced regularly during all of the boiling, with traces, extremely slight, of aldehydic vapors. 50 c.c. of solution, 10.12 gr. of this acid per liter, caused a loss to the mixture of:—After 20 minutes of boiling, 13 c.c. N/10; 25 m., 13.7 c.c.; 30 m., 19.4 c.c.; 40 m., 22.1 c.c.; 1 hour, 30.4 c.c.

Varying then the percentage of butyric acid we found after constant boiling for twenty-five minutes:—With 50 c.c. solution, 0.376 gr. loss in oxygen, 1.6 c.c. N/10; 0.94 gr., 2.6 c.c.; 1.88 gr., 6.2 c.c.; 4.7 gr., 14.3 c.c.; 9.4 gr., 24.2 c.c., and with 50 c.c. of distilled water, only 0.6 c.c. loss in oxygen.

Finally, operating with a more concentrated oxidizing mixture, and employing 50 c.c. of MnO^4K N/2, with the necessary quantities of SO^4Mn and of SO^4H^2, 50 c.c. of butyric solution 8.8 gr. per liter, we found, after twenty-five minutes of boiling:—Active oxygen disappeared, (1) 26.9 c.c. M/10; (2) 26.3 c.c. N/10. The oxidation of the butyric acid at the boiling temperature is, therefore, certain, although very slight, and especially very slow, under the conditions of our operation.

C.—Action of Caproic Acid.—This acid is more oxidizable than the preceding. Thus, ordinarily, it is the most abundant volatile acid of the crude glycerines, and as it is not precipitable in dilute solution of less than 4 or 5% by the cleansing reagents oftenest employed, it is the most troublesome non-precipitable impurity in the analysis of these glycerines. 50 c.c. of a solution of this acid, 4.29 gr. per liter, treated with the mixture made with 50 c.c. of chameleon N/10 caused a loss to the latter of:—After 20 minutes boiling, 20.0 c.c. N/10; 30 m., 24.8 c.c.; 40 m., 23.7 c.c.; 60 m., 32.2 c.c. Varying as before the proportion of acid introduced, we found after 25 minutes of boiling with 50 c.c. solution 0.21 gr. per cent. loss in ogygen, 1.9 c.c. N/10; 0.52 gr., 3.7 c.c.; 1.05 gr., 13.0 c.c.; 2.62 gr., 22.6; 5.25 gr., 23.2 c.c.; and with distilled water only 0.5 c.c.

D.—Action of Caprylic Acid.—This acid being much less soluble than the preceding, we made a saturated solution containing 0.972 gr. per liter. Treated as before, 50 c.c. of this solution yielded, after 20 minutes of boiling, active oxygen disappeared, 5.0 c.c. N/10; 30 m., 5.2 c.c.; 40 m., 8.1 c.c.; 60 m., 9.0 c.c.; but while the preceding solutions yielded no precipitate, either with silver nitrate or with lead subacetate, the latter, on the contrary, precipitates abundantly with each of these two reagents, and the liquor obtained after filtration remains much less oxidizable. Thus, 50 c.c. of solution defecated with silver nitrate, caused a loss, after 25 minutes of boiling with 50 c.c. of MnO^4K N/10, of active oxygen, (1) 2.8 c.c. N/10; (2) 3.1 c.c. N/10. With 50 c.c. of solution, defecated with lead subacetate, there was under the same conditions a loss of active oxygen of:—(1) 1.2 c.c. N/10; (2) 1.3 c.c. N/10. If now we operate with the same volume of distilled water, with the simple addition of the same reagents, without fatty acids, we find wih silver nitrate a loss of oxygen of:—(1) 0.4 c.c. N/10; (2) 0.5 c.c. N/10; with lead subacetate, a loss of oxygen of:—0.6 c.c. N/10; with distilled water alone, a loss of oxygen of:—(1) 0.7 c.c. N/10; (2) 0.5 c.c. N/10. It may, therefore, be concluded (1), that silver nitrate or lead subacetate alone has no appreciable action on the mangano-manganic mixture under boiling; (2), that the solutions of caprylic acid are almost entirely purified by lead subacetate.

The study by the Duclaux method of the volatile acids found in the preceding mixtures after oxidation prolonged for an hour, has shown in all cases the presence of acetic acid, with an excess not attacked of each of the acids employed. This acetic acid not existing before oxidation, has, therefore, been produced at the expense of the fatty acids considered. At the same time there has been a disengagement of carbonic gas. We hope later to return to this interesting question. For the moment we state the fact that the volatile acids of the soap-works glycerine, of which account is to be taken in the analysis of these glycerines, are only butyric acid and especially caproic acid. Nevertheless, the preceding tests demonstrate that in quite dilute solution the oxidation of these acids is extremely slight, and is produced quite slowly, especially if the oxidizing mixture is itself much diluted. We have, therefore, endeavored to free ourselves from their action. We have added to the solutions of pure glycerine a synthetic equi-molecular mixture of these two acids corresponding to an acidity of the glycerine of about 2% estimated in SO^4H^2, this condition being considered as a maximum which will never be exceeded, or perhaps even reached, in the case of glycerines much contaminated.

After preparing a solution containing 11.954 gr. of pure and anhydrous glycerine per liter, we have taken a first fraction of 250 c.c., which we have made up to 500 c.c. with distilled water. To a second fraction of 250 c.c. we have added 60 c.c. of a solution of butyric acid corresponding to 0.516 gr. per cent. of sulphuric acid and 60 c.c. of a solution of caproic acid corresponding to 0.52 gr. per cent. of sulphuric acid, and then made up the volume to 500 c.c. with distilled water; 25 c.c. of each of the two liquids thus obtained were then treated simultaneously by the manganimetric method after the manner of the officinal glycerine, and we obtained:—

A.—Active oxygen, expressed in $MnO^4KN/10$, absorbed by 25 c.c. of the first solution containing per liter 5,977 of anhydrous glycerine:—(1) = 227.5 c.c. MnO^4K N/10, (2) = 227.9 c.c. MnO^4K N/10, (3) = 227.5 c.c. MnO^4K N/10, (4) = 228.2 c.c. MnO^4K N/10, all average = 228.02 c.c.

B.—Oxygen absorbed by 25 c.c. of the second liquor, containing the same percentage of glycerine with 2 per cent. of butyric and caproic acids:—(1) = 227.6 c.c. N/10, (2) = 228.5 c.c. N/10, (3) = 228 c.c. N/10, (4) = 228.1 c.c. N/10, all average = 228.05 c.c.

Allowing for experimental errors, the action of these acids is absolutely null. But the case would not be the same if, instead of employing these solutions at the maximum percentage of 5.9 per liter, we took only a smaller quantity. By operating, for example, under the same conditions with 200 c.c. only of the above glycerine solution made up to 500 c.c., with or without the addition of the same percentages of volatile acids, we obtained:—

A'.—Oxygen absorbed by 25 c.c. of the solution without volatile acids:—(1) = 182.3 c.c. N/10, (2) = 182.5 c.c. N/10, (3) = 182.5 c.c. N/10, (4) = 182.9 c.c. N/10, all average = 182.55 c.c.

B'.—Oxygen absorbed by 25 c.c. of the solution with 2 per cent. of the volatile acids:—1 = 183.6 c.c., (2) = 183.8 c.c., (3) = 184. c.c., (4) = 183.6 c.c., all average 183.75 c.c. Here, as seen, the action of the volatile acids is distinctly noticeable, while the quantity of oxygen that has disappeared remains proportional to the percentages of glycerine oxidized in the tests performed on the soluions of glycerine alone: 228.02×4/5=182.416, instead of 182.55 c.c., obtained experimentally.

It may, therefore, be concluded that the action of the volatile fatty acids of the glycerines of the soap works is perfectly negligible in the analysis of these glycerines, on the express condition that the active oxygen disposable in the manganic mixture after oxidation does not exceed the tenth of that introduced with 50 c.c. of MnO^4K N/2.

Comparative researches with $Cr^2O^7K^2$, employed as an oxidant, have shown us that the same facts are essentially reproduced in the order of those we have mentioned, and that there will be no advantage in substituting this reagent for that of which we have made use.

Action of Impurities Partially Eliminable in the Form of Lead or Silver Compounds.—It would be difficult to isolate each of the impurities found in the factory glycerines, and to study their action separately, as we have for the volatile acids on the oxidizing reagent used for the determination of these products.

In this respect the substances imperfectly precipitable by the defecator employed, constitute a very serious difficulty, so that previously no account has been taken of them, and the defecation has been considered sufficient to free the crude glycerines from substances that interfere with a suitable analytical operation.

We have endeavored to resolve this part of the problem in as simple a way as possible. Suppose that we have prepared a solution of crude glycerine containing in the anhydrous state a percentage per liter of 5.9 gr. ×2=11.8 gr. We take, for example, 250 c.c., and after adding a slight excess of silver nitrate and of lead subacetate, we make up a volume of 500 c.c. On the other hand, we operate in the same way with 200 c.c. only of the same original solution, and make up to a volume of 500 c.c. after defecation. It may be admitted that these two solutions have the same dissolving power upon the lead and silver precipitates obtained, and that in both cases there will be a sufficient excess of these precipitates for saturation. The first will then contain a percentage X of about 5.9 gr. of anhydrous glycerine, while the second will contain only 4/5 X; but both will hold in solution the same quantity of the precipitate formed of the impurities incompletely eliminable by the reagents employed. Call Z the quantity of oxygen necessary to oxidize the pure glycerine contained in 25 c.c. of the first of these two solutions, and Z that required by the impurities contained in this same volume of liquid. Since the action of the volatile acids may be considered as negligible under these conditions, it may be concluded that, under conditions as nearly identical as possible, the quantity of oxygen absorbed by an equal volume of the second liquor will be 4/5 Z+z. Two experiments may give for example Z+z=A and 4/5 Z+z=B; whence Z—4/5Z=A—B and Z=5. (A—B) We have seen that it is better to operate for comparisons with a standard glycerine liquor; therefore, let C be the quantity of oxygen absorbed by 25 c.c. of the standard containing per liter a grams, a being about 5.9 gr. If we designate by x the percentage of oxidizable impurities expressed in glycerine and admitted as constant, contained in one liter of each of the two liquids, we will evidently have $\frac{X+x}{a}$

$\frac{A}{c} = \frac{4/5X+x}{a}$, and $\frac{B}{c} = \frac{X-4/5X}{a}$; whence $\frac{A-B}{c} = \frac{(A-B)}{(c)}$, and $X = 5a$,

We have applied this process of analysis to a large number of factory glycerines, and have always remarked that, if care is taken to prepare the solution so that there will never remain in the mixture after oxidation a greater excess of disposable oxygen than that allowed for the analysis of the officinal glycerines, the action of the impurities of these glycerines not eliminated by the purification as we have performed it, remains practically negligible, which is assuredly an advantage. Two examples will show the correctness of this observation:—

First Example.—We have made with 14.984 gr. of the factory glycerine one liter of solution, of which we have taken (1), 250 c.c., which have been purified with 50 c.c. of silver nitrate (2 per cent.), and 10 c.c. of officinal lead subacetate, and diluted to 500 c.c. The whole, shaken carefully, has been left in repose for 20 minutes and then filtered; (2), 200 c.c., which we have treated like the preceding portion. At the same time we have made a standard solution containing for 500 c.c. 2.9975 gr. of anhydrous glycerine, or 5.995 gr. per liter. We have then prepared three oxidizing mixtures, each with 50 c.c. MnO^4K N/2, 20 c.c. SO^4Mn (15 per cent.), and 20 c.c. pure SO^4H^2. To the first we have added 25 c.c. of the first liquor; to the last we have added 25 c.c. of the second liquor, 10 c.c. of oxalic acid N/2, in such a way as to leave in the mixture only 40 c.c., or 4/5 of the MnO^4K N/2 introduced. In thus operating, we have made use in the three cases of the same pipette for measuring the oxidizing liquor. We have boiled with return condenser for 25 minutes, then titrated, after addition of 10 c.c. of oxalic acid, with chameleon N/10, poured in drop by drop until coloration. These liquids have thus reduced; the first, 227.3 c.c. of MnO^4K N/10; the second, 182.04 of the same; and the standard liquor 230.34 of the same. The application of the preceding formulas give:—$X = \frac{5 \times 5.995 \times 227.3 - 182.04}{230.34} = 5.89$ gr. It will be remarked that $227.3 \times 4/5 = 181.84$, a value not differing materially from the number 182.04, found experimentally. But if, instead of oxidizing the second liquor with 40 c.c. of MnO^4K N/2, we had left 50 c.c., as in the other experiments, the results would have been different. We have indeed obtained in this way MnO^4K N/10 reduced = 185.7 c.c., instead of 182.04 c.c.

Second Example.—Operating with another solution of factory glycerine, of which we made a solution of 14.358 gr. per liter, we obtained:—

1. Oxygen absorbed by liquid 250/500 c.c.; (1) = 209.3 c.c. N/10, (2) = 209.8 c.c. N/10, (3) = 209.7 c.c. N/10, (4) = 210.1 c.c. N/10, all average = 209.725 c.c.

2. Oxygen absorbed by liquid, $\frac{200}{500}$ c.c., oxidized with 40 c.c. MnO^4K N/2:—(1) 167.8 c.c. N/10; (2) 167.4 c.c. N/10; (3) 167.6 c.c. N/10; (4) 168.2 c.c. N/10; averaging 167.57 c.c.

$209.725 \times 4/5 = 167.78$.

3. Oxygen absorbed by liquid, $\frac{200}{500}$ c.c., oxidized with 50 c.c. MnO^4K N/2:—(1) 172.6 c.c. N/10; (2) 172.8 c.c. N/10; (3) 172.4 c.c. N/10; (4) 173.1 c.c. N/10; averaging 172.725 c.c.

On observing all the precautions mentioned, it will be seen that it is sufficient to defecate the industrial glycerines with a slight excess of silver nitrate and lead subacetate in order to have, after filtration, a liquor which may be considered and analyzed as a solution of officinal glycerine, provided that it contains a percentage of pure glycerine of about 5.9 gr. per liter. This is a condition to be realized, and which will assure to the analysis an accuracy quite sufficient, even for the glycerines of the soap works. Evidently, the precision of the method will be a fortiori much greater for the incomparably purer glycerines of the stearine works.

A meeting has been called for next week in Toronto, Canada, by the proprietary medicine interests there for the purpose of establishing an organization to combat the Wholesale Druggists' Association of Canada in their demands for a higher margin of profit. The manufacturers are planning to establish agencies in the principal jobbing centers throughout Canada. The fight between the proprietary medicine interests and the wholesale dealers has been waged for a year and a half, since the formation of a powerful buying syndicate by the retail druggists in Toronto. This action affected the jobbers' business to a considerable extent and they sought a measure of relief in a demand from the manufacturers for a 15 and 5 per cent. discount from the selling price, instead of a 10 and 5 per cent. rebate from the cost price.

Wholesale Prices Current.

☞Our Quotations are those of Importers and Manufacturers, for original packages and large lots. For broken lots higher prices are asked.

Oils, Etc.

Vegetable Oils.

Linseed, city, raw, in bbls	℔ gal.	.37 @38
boiled, in bbls		.39 @40
out of town, on spot		.34 @36
Calcutta, raw, in bbls		.65 @—
Varnish, oil, American		.37 @38
Calcutta		.65 @—
Cottonseed, crude, prime		.33½@34
" " f. o. b. mills		.30 @31
Crude, off quality		—@—
Yellow summer, prime		.36 @36½
Yellow summer, butter		.40 @41
Yellow summer, off q'lity		.35½@36
White summer		.39½@40
Yellow winter		.39½@40
Winter, white		.40 @42
Soap stock	℔ lb.	—@—
Olive	℔ gal.	.48½@53
Olive soap stock	℔ lb.	5¼@ 5¾
Palm, red		5¾@ 6
Lagos		6¼@ 6¾
Cocoanut, Ceylon		5¾@ 6
Cochin		5¾@ 6
Corn		3.80@ 4
Castor oil No. 3		9½@11
Mustard		.47 @48
Peanut, white	℔ lb.	— @—
yellow		— @—
Pine Oil	℔ gal.	.18 @—
Rosin, first run		.16½@17
second run		.18½@19
third run		.20½@21
fourth run		.22½@23
Rapeseed, in bbls., burning		.61 @62
blown		.59 @60
refined		.58 @59

Animal and Fish Oils.

Black fish, crude	℔ gal.	.35 @40
bleached, winter		.48 @49
Cod, domestic, prime		.39 @40
Newfoundland		.40 @41
Degras, French	℔ lb.	4 @ 5
English		2¾@ 3
German		2½@ 2¾
American		2½@ 2¾
Herring	℔ gal.	—@22
Lard, prime winter		.58 @59
Extra No. 1		.48 @50
No. 1		.40 @42
No. 2		.38 @—
Menhaden, Northern		.22 @22½
Southern		.21 @21½
Brown, strained		.31 @32
Light, strained		.32 @33
Bleached, winter		.34 @35
Ex. bleached, winter, white		.36 @37
Neatsfoot, white		.67 @68
Prime		.54 @—
Dark		.50 @51
20 deg. cold test		.98 @99
30 deg. cold test		.86 @—
Red, Elaine		.44 @45
Saponified	℔ lb.	5 @ 5¼
Seal, bleached, refined	℔ gal.	.45 @46
Sod, American		.28 @29
English		.28 @33
Sperm, crude		—@55
Natural, spring		.61 @62
Natural, winter		.65 @66
Bleached, spring		.63 @66
Bleached, winter		.67 @68
Tallow, prime		.48 @49
Acidless		.52 @53
Dark		.48 @49
Whale, crude		—@—
Natural, winter		.46 @47
Natural, spring		—@—
Bleached, spring		—@—
Bleached, winter		.48 @49
Extra bleached, winter		.50 @51

Mineral Oils.

Black reduced, 29 gravity, 25@30 c. t.	.13 @14
29 gravity, 15 cold test	.14 @15
27 gravity, zero	.18½@19½
Summer	.13 @14
Cylinder, light, filtered	.20½@21½
Dark, filtered	.18½@19½
Extra cold test	.25 @32
Dark steam refined	.14½@16½
Natural, Franklin, 32 gravity	.12½@17½
Smiths Ferry, 32@34 gravity	.10½@12
West Virginia, 29 gravity	.21½@23½
Neutral filtered lemon, 33@34 gravity	.17½@22
White, 33@34 gravity	.25 @27
32@34 gray, bloomless	.17 @22
32 gray, wool grade	.15 @17
Paraffine, high viscosity	.24 @27
903-907 sp. gr	.15 @15½
903 sp. gr	.14 @14½
883 sp. gr	.11¾@12
875 sp. gr	.11 @11½
865 sp. gr	.11 @11½
Red paraffine	.14 @15½
Spindle, No. 1, filtered	.17½@18½
No. 1	.14½@15½
No. 2	.13½@14½
No. 3	.12½@13½
No. 4	.12 @12½

Oil Cake, Meal, Etc.

Calcutta, cake, city	℔ long ton.27.00@—
City, domestic	℔ long ton.22.00@22.50
Western, in bags	℔ long ton.22.00@22.50
Cottonseed cake at Memphis	
	℔ short ton.20.00@—
at New Orleans	℔ long ton.25.00@—
at Galveston	22.75@—
at Boston	℔ long ton.25.75@—
Cottonseed meal at Memphis	
	℔ short ton.20.00@—
at New Orleans	℔ long ton.25.00@—
at Galveston	22.75@—
Corn, cake	℔ short ton.22.00@—
meal	℔ short ton.22.00@—

Wax, Lard, Tallow, Etc.

Paraffine wax, crude	℔ lb.	5 @ 6
refined, 120 m. p		6½@ 6¾
125 m. p		6⅝@ 6¾
130 m. p		7⅛@ 7¼
135 m. p		8¼@ 8¼
140 m. p		13½@14
Candles, adamantine, 6s. 16 oz		9 @10
14 oz		9 @10
paraffine, 4s. and 6s		.10 @11
12s., 16 oz		.11 @12
14 oz		11½@12½
12 oz		—@—
Candles, patent sperm, 4s. and 6s		.38 @40
sperm, 4s. and 6s		.33 @34
Stearic acid—		
Plain, 4s., 6s. and 8s		.12 @—
patent ends, 4s. and 6s		.12½@—
cartons, 6 lbs. each		.13 @—
Lard, spot, tierces		6¼@—
export, packages		6⅜@—
compounds		6⅜@ 6½
neutral		8¼@ 8½
Oleo, stearine		6¾@ 7
Lard, stearine		7¾@ 8
Tallow		5¼@ 5½
Stearic acid		.11 @11¼

Naval Stores.

Spirits, turpentine, spot	℔ gal.	.59½@ —
Rosin, strained	℔ bbl.	2.52½@ —
Good strained		2.52½@ —
D		2.60 @ —
E		2.65 @ —
F		2.70 @ —
G		2.75 @ —
H		2.95 @ —
I		3.15 @ —
K		3.50 @ —
M		4.10 @ —
N		4.25 @ —
Window Glass		4.50 @ —
W. W		4.75 @ —
Tar, ordinary		2.70 @2.80
oil, barrels		4.50 @ —
Pitch		2.20 @2.25

Paints, Varnishes, Etc.

White Lead, Zincs, Etc.

White lead, American dry	℔ lb.	5 @ 5¼
In oil		6 @ 6¾
English in oil		9¼@ 9¼
Litharge, American, powdered		5½@ 6¼
English glassmakers		8¾@ 9
Red lead, foreign		8 @ 8¼
American		6½@ 6¾
English glassmakers		7 @7¼
Orange mineral, American		7¾@ 8
English		9 @11
French		10½@11¼
German		8¾@ 9
China white		9¼@ 9¾
Flake white		9¼@ 9¼
Cremnitz, white		13 @17
Zinc white, Paris G. S., 50 bbls.		.9⅞ less 4 ℔ ct
G. S., 25 bbls		.9¾ 2 ℔ ct
G. S., 10 bbls		.8¾ 1 ℔ ct
R. S., 50 bbls		.8¾ 4 ℔ ct
R. S., 25 bbls		.8¾ 2 ℔ ct
R. S., 10 bbls		.8¾ 1 ℔ ct
Antwerp R. S., 50 bbls		.6¾ 4 ℔ ct
R. S., 25 bbls		.6¾ 2 ℔ ct
R. S., 10 bbls		.6¾ 1 ℔ ct
G. S., 50 bbls		.8¾ 4 ℔ ct
G. S., 25 bbls		.8¾ 2 ℔ ct
G. S., 10 bbls		.8¾ 1 ℔ ct
G. S. in poppy oil		.12 @12¾
R. S. in poppy oil		.10¾@11½
American, extra dry		4¾@ 4¾
Florence, Green Seal		6¾@—
Florence, Red Seal		6 @—
German, red seal		6 @ 6¼
green seal		6½@ 6¾

Dry Colors.

REDS.

Carmine, No. 40		3.50 @3.75
Crocus martus, imported		2½@ 3½
standard American		1 @ 2½
Indian red, standard American		3 @ 3¼
English		4½@ 5½
Rose pink, American		8 @ 10½
English		8½@ 10
Tuscan red, English		7 @ 10
Turkey red, English		4 @ 6
Venetian red, English, extra, ℔ 100 lbs		1.25 @1.75
prime		1.15 @1.75
American		.50 @1.50
Vermilion, imported English, ℔ lb.		.80 @ 85
American quicksilver, bulk		— @ 70
bags		— @ 71
Chinese		.90 @1.00
American		10 @ 25

BLACKS.

Bone	℔ lb.	2 @ 5
Carbon		5 @10
High grade		.15 @20
Drop, American		4 @ 6
English		5 @15
Ivory		.16 @20
Lamp, commercial		4½@ 6
Refined		7 @15
Calcined		9 @20
fine spirit		.20 @35

BLUES.

Celestial	℔ lb.	4 @ 6
Chinese		.29 @32
Prussian		.27 @30
Italian		.18 @25
Prussian, foreign		.32 @36
Refiners'		.60 @70
Soluble		.29 @33
Ultramarine		4½@15
Verditer		.25 @30

BROWNS.

Sienna, Italian, burnt and powdered	℔ lb.	3 @ 6½
burnt lump		1¾@ 3
raw, powdered		3 @ 6½
raw, lump		1¾@ 3
American burnt and powd'd		1½@ 2
raw		1½@ 2
Spanish brown		½@1
Umber, Turkey, burnt and powdered		2½@ 3½
burnt lumps		3½@ 4
raw and powdered		2½@ 3½
raw, lumps		2½@ 3
American burnt		1½@ 2
raw		1½@ 2

GREENS.

Chrome, chemically pure	℔ lb.	.17 @25
Extra		.12 @15
Super		8 @10
Common		3½@ 6
Paris, in bulk		.11 @12
Verdigris, French, pods		.21 @22
C. p. powdered		.25 @32

YELLOWS.

Chrome	℔ lb.	11 @ 14
Ocher, French		1½@ 2½
Foreign, golden		3 @ 4
Domestic	℔ ton.	8.50 @16.00
golden	℔ lb.	2½@ 3

MISCELLANEOUS.

Barytes, prime white, foreign,	℔ ton.	17.50 @20.00
foreign floated		.19.00 @21.00
prime white, domestic		.17.00 @18.00
domestic floated		.18.50 @20.00
off color		.13.00 @16.00
crude, No. 1		.10.00 @11.00
No. 2		8.00 @ 9.00
No. 3		7.00 @ 8.00
Blanc fixe	℔ lb.	2½@ 2¾
Bronze powder		55 @ 2.50
Brocades		55 @ 1.50
Chalk	℔ ton.	3.00 @ 3.25
Clay, China, imported		.11.00 @17.00
Domestic		8.50 @10.00
Coal tar, in oil bbls		4.50 @ 4.70
Cobalt, oxide	℔ lb.	2.50 @ —
Feldspar	℔ ton.	10.00 @12.00
Fuller's earth, lump	℔ 100 lbs.	80 @ 85
powdered		85 @ 90
Lithopone		3¾@ 7
Marble flour	℔ ton.	7.00 @ 8.00
Manganese, car lots	℔ ton.	22.00 @60.00
jobbing	℔ lb.	3 @ 6
Magnesite, raw	℔ ton.	7.00 @ 8.00
calcined, pow'd	℔ lb.	1¾@ 2
Plaster	℔ bbl.	1.40 @ 1.50
dentists'		1.75 @ —
Pumice stone, orin'l cks	℔ lb.	1¾@ 4
selected lumps in bbls		4 @ 5
pow'd pure, bbls	℔ 100 lbs.	1¾@ 2
Putty, in bulk	℔ lb.	1½@ 2
12½ to 25-lb. tins		1¼@ 2¼
1 to 5-lb. tins		2¼@ 4¼
bladders		1¾@ 2½
Rottenstone, orin'l casks	℔ lb.	6 @ 7½
selected lumps		6 @ 25
powdered, in bbls		2½@ 4
Silex	℔ ton.	12.00 @40.00
Smalt, German blue	℔ lb.	6 @ 10
super, black		4 @ 7
Talc, American	℔ 100 lbs.	75 @ 1.25
French	℔ lb.	1¾@ 2¼
Italian		2¾@ 4¾
Terra alba, American No. 1		65 @ 85
No. 2		45 @ 50
English		95 @ 1.00
French		95 @ 1.00
Whiting, commercial		45 @ 48
Gilders'		55 @ 57
extra gilders'		58 @ 60
American, Paris		64 @ 68
English cliffstone		75 @ —

GLUES.

Extra white	℔ lb.	18 @ 24
Medium white		14 @ 17
Cabinet		11 @ 15
Low grade		8 @ 11
Foot stock, white		11 @ 14
brown		7 @ 10
Common bone		6 @ 8
Irish		13 @ 16
French		10 @ 40
German hides		12 @ 18
common		10 @ 12

VARNISH GUMS.

Asphaltum, Barbadoes	℔ lb.	2½@ 4
Cuban		1¼@ 3½
Egyptian		5¾@ 6½
Copal, Sierra Leone, cleaned		.60 @75
Zanzibar, pure white		.55 @60
thumb size		.35 @40
sorts		.44 @46
bean and pea		.25 @27
Manila, pale		.11 @17
dark hard		.12 @13
bright amber		.11 @13
standard sorts		.8 @ 9
nubs, No. 1		5¼@ 6
nubs, No. 2		4½@ 4¾
chips, No. 1		4½@ 4¾
chips, No. 2		4¼@ 4¾
Damar, Batavia		.12 @13
Singapore		9 @10
Kauri, No. 1		.31 @35
No. 2		.24 @26
No. 3		.16 @18
Chips		.14 @25
Dust		7 @12
B. 1		.20 @23
B. 2		.13 @15
Brown chips		6 @15
Brown dust		4 @ 5
Single cross		.33 @35
Double cross		.40 @45
Triple cross		.43 @48
Picture quality		.65 @75
Pale and fine selected		.50 @55
Sandarac		.16 @18

Window Glass.

Eastern Price List.

AMERICAN WINDOW GLASS.

SINGLE.

Inches	AA	A	B
25	$33.00	$29.00	$27.00
34	39.00	32.00	30.00
40	39.50	33.00	31.00
50	51.00	43.00	38.00
54	55.00	46.00	40.00
60	59.00	49.50	43.00
70	68.00	57.00	48.00
80	72.00	63.50	55.50
84	76.00	69.50	60.00

DOUBLE.

Inches	AA	A	B
25	$52.00	$44.00	$37.00
34	56.00	47.50	45.50
40	63.00	49.50	48.00
50	67.00	57.50	55.00
54	69.50	61.50	56.00
60	71.00	63.00	57.50
70	76.00	71.00	65.50
80	82.00	74.00	68.00
84	83.50	75.50	69.50
90	88.00	80.00	74.00
94	90.00	82.00	75.50
100	107.00	96.00	89.50
105	114.00	105.00	96.00
110	127.00	117.50	109.00
115	143.00	131.00	121.50
120	168.00	153.50	144.00
125	181.50	167.00	157.50
130	195.00	180.00	171.00

An additional 10 per cent. will be charged for all glass more than 40 inches wide. All sizes over 52 inches in length, and not making more than 81 united inches, will be charged in the 84 united inches bracket. All glass 54 inches wide or wider, not making more than 116 united inches, will be charged in the 120 united inches bracket.

Discounts at present, 90 and 10 per cent. on small sizes and 90 and 20 per cent. on large sizes.

Western Price List.

United Inches.	BRACKET. Sizes.	AA	SINGLE. A	B
25	6x8 to 10x15	$32.00	$26.75	$25.50
34	11x14 to 14x20	33.50	28.00	26.75
40	12x13 to 16x24	36.00	30.00	28.00
50	18x22 to 20x30	37.50	31.75	29.50
54	15x36 to 24x30	38.75	32.75	30.00
60	20x24 to 24x36	40.00	34.75	31.00
70	26x34 28x32 30x30 32x38 to 30x40	42.75	38.50	33.75
80	to 30x50	48.75	44.50	38.50
84	34x36 30x52 to 30x54	52.00	47.50	41.75

United Inches.	BRACKET. Sizes.	AA	DOUBLE. A	B
25	6x8 to 10x15	$42.75	$37.50	$35.50
34	11x14 to 14x20	46.75	41.50	38.75
40	12x13 to 16x24	52.00	45.50	41.50
50	18x22 to 20x30	56.00	49.50	46.00
54	20x20 15x36 to 24x30	57.50	50.75	46.75
60	20x24 to 24x36	58.75	52.00	47.50
70	26x34 28x32 30x30 32x38 to 30x40	62.75	56.00	50.75
80	to 30x50	68.00	61.50	55.50
84	34x36 30x52 to 30x54	69.50	62.75	56.75
90		73.50	66.75	61.50
94		74.75	68.00	62.75
100		88.00	80.00	74.75
105		94.75	86.75	80.00
110		106.50	97.50	90.75
115		118.75	108.00	101.50
120		140.00	126.75	120.00
125		152.50	140.25	133.50
130		167.00	153.75	147.00

An additional 10 per cent. will be charged for all glass more than 40 inches wide. All sizes over 52 inches in length, and not making more than 81 united inches, will be charged in the 84 united inches bracket. All glass 54 inches wide or wider, not making more than 116 united inches, will be charged in the 120 united inches bracket.

The official discounts at present are 90 and 10 on above list.

Metallic Paints.

Brown	℔ ton.	19.00@21.00
Red		16.00@20.00

Colors in Oil.

Black coach, Japan	℔ lb.	.20 @35
in oil		.14 @18
drop		.14 @18
lampblack		.12 @14
Blue, Chinese		.36 @46
Prussian		.32 @36
ultramarine		.13 @16
Brown, sienna, burnt		.12 @15
raw		.12 @15
Umber, burnt		.11 @14
raw		.11 @14
Vandyke, brown		.11 @14
Green, chrome		.10 @15
Paris		—@24
Red, Indian		.12 @14
Venetian		6 @ 8
Yellow, chrome		.16 @20
ocher, French		6 @ 8

Drugs.

Opium.

Opium, cases	℔ lb.	$2.92½@ 2.95
Rochelle salt		21 @ 21½

Morphine.

Morphine, bulk	℔ oz.	2.10 @ 2.20
oz. vials		2.15 @ 2.25
⅛ oz. vials, 2½ oz. bxs		2.45 @ 2.50

Codeine.

Codeine, pure, bulk	℔ oz.	3.20 @ 3.45
ozs		3.25 @ 3.45
eighths		3.45 @ 3.65

Sulphate, nitrate and muriate, 25c., and phosphate, 50c. per oz. less than pure.

Quinine.

Quinine, 100 oz. tins	25 @ —
50 oz. tins	25½@ —
25 oz. tins	26 @ —
5 oz. tins	27 @ —
1 oz. tins	30 @ —
German, outside	24 @ —
Java	22½@ 23
Cinchonidia, bulk	18 @ 22

Miscellaneous.

Acetanilid, in bbls	℔ lb.	20½@ 21
Acid, benzoic, true	℔ oz.	10 @ 10½
ex toluol	℔ lb.	43 @ 43
boracic, crystals, city		10¾@ 11½
powdered, city		11¼@ 11¾
carbolic, drums		13 @ 15
bottles		19 @ 22
citric, domestic		33 @ 33½
Sicilian		— @ —
pyrogallic, bulk		1.60 @ 1.70
salicylic		31 @ 32
Alcohol, 94%	℔ gal.	2.46 @ 2.48
ref. wood, 95%		55 @ —
97%		60 @ —
purified		1.25 @ 1.30
Aloin	℔ lb.	36 @ 41
Ambergris, black	℔ oz.	15.00 @20.00
gray		27.50 @30.00
Ammonia, carb. domestic	℔ lb.	7¾@ 8¼
foreign		8½@ 9
Antimony, needle		7 @ 8
Areca nuts		6 @ 7
Balm of Gilead buds		— @ 40
Barium, chloride		1.67½@ 1.70
chlorate		— @ 28
nitrate		6 @ 6½
Barbadoes tar, in bbls	℔ gal.	25 @ 30
Bayberry wax	℔ lb.	16 @ 18

Bay rum, bbls.	1.75	@	2.25
Beeswax, white, pure	40	@	42
yellow, crude	29	@	29½
yellow, refined	32	@	34
Bismuth, citrate	2.35	@	2.40
subcarbonate	2.25	@	2.30
subgallate	2.15	@	2.20
subnitrate	2.00	@	2.05
Blue pill	37	@	39
Borax, in bbls	7½	@	7¾
in bags	7¼	@	7½
powdered	7½	@	8
Bromide, ammonium	40	@	—
potassium	30	@	—
sodium	35	@	—
Bromine, bulk	—	@	50
Burgundy pitch	2¾	@	3
Caffeine	2.50	@	2.65
Calomel, American	80	@	82
English	—	@	1.00
Cantharides, Chinese	37½	@	39
powdered	42½	@	45
Russian	72½	@	75
powdered	75	@	80
Carnauba wax, Flor	23½	@	24
No. 1	23	@	24
No. 2	—	@	—
No. 3	22	@	22½
North Country	22	@	22¾
Carbon, bisulphide	9	@	10
Castile soap, white, pure	10¾	@	—
Marseilles	8	@	10
green, pure	8	@	10
ordinary	6	@	6½
mottled, pure	6¾	@	8
ordinary	5¼	@	5½
Castor oil, city, bbls	9¾	@	11¾
cases	10¼	@	12¼
Ceresin, yellow	13½	@	19¾
white	15	@	21½
Chloral hydrate, crusts	88	@	90
crystals	90	@	92½
Chloroform	45	@	50
Civet	1.75	@	2.25
Clover tops	6	@	7
Cocaine bulk	3.50	@	3.75
Cocoa butter, 12-lb. bxs	33	@	34
bulk	28	@	28½
Codliver oil, Newf'land	2.50	@	3.50
Norwegian	105.00	@	145.00
Colocynth apples, Spanish	26	@	27
Trieste	35	@	40
Cologne spirit, 190° proof gal.	132	@	1.34
Corrosive sublimate	71	@	73
Coumarin, refined	3.25	@	3.50
Creosote, beechwood	85	@	90
Cuttlefish, Trieste	15	@	16
Jewelers' small	54	@	55
Jewelers' large	52	@	54
Dragons' blood, mass	15	@	20
reeds	47	@	50
Epsom salts	1.00	@	1.10
Ergot, Russian	35	@	40
Spanish	35	@	40
Ether, 1880	53	@	54
washed	56	@	57
1890	57	@	58
Eucalyptol	1.05	@	1.15
Formaldehyde	12½	@	15
Fusel oil, crude	1.15	@	1.45
refined	1.30	@	1.60
Gelatine, silver	24½	@	35
gold	30	@	60
Glucose, 42°	—	@	1.70
Glycerine, C. P., bulk	14½	@	15
drums and bbls. added.			
C. P., cans	15½	@	16
Dynamite	12½	@	13
Grains of Paradise	11½	@	15
Grape sugar, 70°	1.85	@	—
Guarana	72½	@	75
Haarlem oil	1.78	@	1.85
Hypophosphite, lime	48	@	50
potash	48	@	50
soda	48	@	50
Iceland moss	5	@	6
Insect powder	14	@	26
Iodine, re-sublimed	2.70	@	2.75
Iodoform	3.00	@	3.05
Irish moss, ordinary	6½	@	8
bleached	9½	@	10
Isinglass, Russian	4.00	@	4.10
American	75	@	85
Japanese	50	@	52
Japan wax	15	@	15½
Kola nuts	9	@	10
Licorice, mass, Greek	10	@	12
Spanish	14	@	20
stick, domestic	16½	@	23½
foreign	25	@	28
Lithia, carb	1.35	@	1.40
Lupulin	25	@	28
Lycopodium	56½	@	57½
Manna, large flake	50	@	55
small flake	32	@	34
sorts	29	@	30
Menthol	5.25	@	5.40
Mercury, bisulphate	55	@	57
Myrbane oil	7½	@	8½
Musk, pods, Cab	6.00	@	8.00
Tonquin	10.00	@	16.00
grain, Cab	—	@	14.00
Canton, extra	—	@	1.00
Canton, good	15	@	17
Tonquin	18.00	@	21.00
Druggists'	14.00	@	14.50
Naphthaline, balls	2½	@	—
flakes	2½	@	—
Nitrate silver, crystals	35½	@	39
Nux vomica	2¾	@	3
Petrolatum, bbls., amber	2½	@	—
pale yellow	3½	@	3¼
lily white	7	@	7½
snow white	11	@	—
Phosphorus	45	@	1.10
Pilocarpine	10.00	@	12.00
Poppy heads	12	@	20
Precipitated chalk	4½	@	5½
Precipitate, red	90	@	92
white	95	@	97
Potash, permanganate	9½	@	10
cyanide, bulk	21	@	23
iodide, bulk	2.05	@	2.10
Quicksilver	62	@	63
Resorcin	1.35	@	1.50
Rochelle salt	21	@	21½
Salicine, bulk	3.75	@	3.85
Salol, bulk	1.10	@	1.20
1 lb. bots	1.20	@	1.30
½ lb. bots	1.25	@	1.35
¼ lb. bots	1.35	@	1.45
Santonine, crystals, bulk	6.95	@	7.00
powdered, 20c. per lb advance			
Seidlitz mixture	17½	@	18
Sesame oil	61	@	67½
Soda, benzoate	40	@	45
salicylate	33	@	35
Spermaceti, block	23½	@	24
cakes	24	@	24½
St. John's bread	3	@	3½
Strontia, nitrate	8	@	8¼
Strychnine, crystals, bulk	65	@	75
Sugar of milk, cob	17	@	18
powdered	14½	@	15½
Sulphur, roll	1.85	@	2.15
flour	1.95	@	2.20
Tamarinds	1.75	@	2.00
Thymol	1.75	@	1.80
Vanillin	55	@	60
Venice turpentine	17	@	18
Zinc, chloride, gran	4¾	@	5
sulphate	2¼	@	2½

Balsams.

Copaiba, Central American	34	@	35
Para	40	@	42½
solidifiable	45	@	47½
Fir, Canada	3.25	@	3.60
Oregon	1.25	@	1.35
Peru	1.10	@	1.15
Styrax	13	@	14
Tolu	26	@	28

Barks.

Angostura	30	@	35
Bayberry	—	@	15
Black haw, of root	9	@	10
of tree	5	@	9
Buckthorn	5	@	5½
Cascara Sagrada	14	@	18
Cascarilla, quills	11	@	12
ordinary	8½	@	9
Canella alba	11	@	12
Cinchona—red, quills	20	@	23
broken	10	@	20
yellow, quills	22	@	30
broken	15	@	20
Condurango	12	@	13
Coto	—	@	—
Cottonroot	12	@	13
Cramp	6	@	7
Dogwood, Jamaica	5	@	6
Elm, select	—	@	40
Mersereon	8	@	10
Oak, red	2	@	4
white	3	@	—
Orange peel, bitter, Curacao, ¼s	2½	@	3
sweet, Malaga, pieces	7	@	10
quarters	9½	@	10
sweet, Trieste	4¾	@	5¼
Prickly ash	14	@	20
Pomegranate, of fruit	7	@	9
of root	15	@	15½
Quebracho	10	@	10½
Sassafras	7½	@	10
Simaruba	45	@	50
Soap, whole	5¾	@	6
cut	6¾	@	7
Wahoo, of root	18	@	20
of tree	7	@	8
White pine	4	@	4¼
White poplar	3½	@	4
Wild cherry	5	@	8
Witch hazel	3½	@	4

Beans.

Calabar	14	@	20
St. Ignatius	12	@	16
Tonka, Angostura	60	@	65
Para	17½	@	22½
Surinam	30	@	35
Vanilla, Mexican whole	5.00	&	11.00
cuts	3.50	@	4.25
Bourbon	1.50	@	5.00
Tahiti	55	@	80

Berries.

Cubeb, whole	8	@	8½
powdered	11	@	13
Fish (cocculus indicus)	3	@	4
Juniper	2¼	@	2½
Laurel	4	@	5
Prickly ash	15	@	18
Saw palmetto	10	@	12

Essential Oils.

Almond, bitter	3.50	@	5.75
artificial	65	@	1.50
sweet, true	38	@	40
peach-kernel	16	@	24
Amber, crude	10	@	15
rectified	18	@	22
Anise	1.10	@	1.12½
Bay	2.50	@	2.75
Bergamot	1.75	@	2.00
Birch tar, crude	12	@	15
extra	40	@	60
Cade	15	@	21
Cajeput	67½	@	70
Camphor	9	@	10
Caraway seed	1.05	@	1.35
Cassia, 75@80%	72½	@	75
Cedar	47½	@	50
Cinnamon, Ceylon, heavy	7.50	@	16.00
Citronella	24	@	27
Cloves, cans	1.05	@	1.07
bottles	1.07½	@	1.10
Copaiba	75	@	85
Coriander	5.25	@	6.50
Croton	90	@	1.10
Cubeb	85	@	90
Cummin	2.25	@	2.35
Erigeron	55	@	80
Australian	35	@	70
Australian	35	@	60
Fennel seed, sweet	60	@	1.25
bitter	45	@	1.00
Geranium, rose, African	4.75	@	5.75
Turkish	2.25	@	4.50
French	7.50	@	12.00
Ginger	4.00	@	6.50
Gingergrass	1.10	@	1.35
Hemlock	45	@	50
Juniper berries	50	@	1.00
wood	17½	@	30
Lavender, cultivated	2.00	@	2.50
flowers	1.75	@	2.00
spike	—	@	90
garden	35	@	50
Lemon	55	@	60
Lemongrass	1.85	@	1.90
Limes, expressed	1.50	@	1.60
distilled	55	@	95
Linaloe	2.00	@	2.25
Mace, distilled	1.00	@	1.10
expressed	65	@	70
Malefern	2.00	@	2.20
Mustard, natural	4.50	@	5.50
artificial	2.00	@	3.00
Neroli, petale	30.00	@	35.00
bigarade	25.00	@	30.00
Nutmeg	80	@	90
Orange, bitter	1.75	@	2.00
sweet	1.60	@	1.70
Origanum	18	@	22
Patchouli, leaf	6.00	@	8.50
cultivated	6.50	@	9.00
Pennyroyal	1.05	@	1.15
Peppermint, tins	2.65	@	2.75
bottles	3.35	@	3.40
Petit grains, French	4.00	@	6.00
South America	1.70	@	2.00
Pimento	1.50	@	2.25
Rhodium	1.50	@	13.50
Rose	3.65	@	4.50
Rosemary flowers, French	62½	@	80
Trieste	42½	@	50
Sandalwood, East India	3.25	@	3.50
West India	1.50	@	2.00
Australia	2.75	@	3.00
Sassafras, natural	52½	@	60
artificial	27	@	31
Safrol	34	@	36
Savine	65	@	1.50
Spearmint	4.00	@	4.25
Spruce	40	@	45
Tansy	3.50	@	4.25
Thyme, red, French	90	@	1.00
white, French	95	@	1.10
Wintergreen, nat'l (sweet birch)	2.00	@	2.10
synthetic	38	@	40
leaf	—	@	2.50
Wormseed, Baltimore	1.50	@	1.60
Wormwood, pure	2.65	@	3.00
Ylang ylang	40.00	@	70.00

Flowers.

Arnica	9	@	9½
Calendula	19	@	21
Chamomile, Roman	10	@	10½
German, true	11½	@	15
Hand picked	10	@	12
Hungarian	10	@	12
Elder	10	@	11
Insect	15	@	26
Lavender, ordinary	4½	@	5½
select	6½	@	7
Mullein	60	@	65
Poppy, red	30	@	35
Rosemary	15	@	16
Saffron, American	—	@	45
Alicante	5.00	@	6.50
Valencia	8.00	@	9.00

Gums.

Aloes, Curacao, in boxes	3½	@	4
Cape	14	@	16
Socotrine	18	@	20
Ammoniac	18	@	20
Arabics, firsts	30	@	35
seconds	20	@	23
thirds	16	@	19
fourths	13	@	14
sorts	6	@	9
Asafoetida	21	@	26
Benzoin, Siam	40	@	1.00
Sumatra	26	@	34
Camphor, American, ref'd, bbls	58½	@	59
cases	59	@	60
Chicle	36	@	42
Euphorbrum	13	@	15
Galbanum	40	@	45
Gamboge, pipe	67½	@	70
Guaiac	18	@	24
Kino	20	@	22
Mastic	30	@	32
Myrrh	18	@	27
Olibanum, siftings	5½	@	—
sorts	6	@	7
tears	9	@	10
Sandarac	17	@	18
Scammony, rosin	2.00	@	2.10
Aleppo	2.50	@	2.75
Virgin	3.50	@	6.00
Senegal, picked	7½	@	20
sorts	7½	@	9
Spruce	1.25	@	1.75
Tragacanth, Aleppo, firsts	60	@	65
seconds	50	@	55
thirds	38	@	43
fourths	27	@	35
Turkey firsts	75	@	90
seconds	45	@	57
thirds	36	@	41

Herbs and Leaves.

Aconite	8	@	9
Althea	10	@	12
Bay	14	@	15
Belladona	10	@	12
Buchu, short	18	@	20
long	65	@	70
Cannabis indica, tops	95	@	1.05
siftings	90	@	—
Coca, Huanoco	28	@	30
Truxillo	17	@	20
Coltsfoot	7	@	9
Conium	7	@	8
Deer tongue	4½	@	5
Damiana	8	@	9
Digitalis	8	@	10
Eucalyptus	3½	@	5
Grindelia robusta	—	@	10
Henbane	7	@	7½
Horehound	4¾	@	5
Jaborandi	12	@	14
Laurel	3	@	3½
Lobelia	7½	@	8
Matico	—	@	16
Marjoram, German	21	@	22
French	8	@	10
Pennyroyal	—	@	8½
Peppermint, American	—	@	10
German	25	@	30
Pichi	14	@	15
Pulsatilla	9	@	10
Prince's pine	—	@	8
Rose, red	75	@	80
Rosemary	3½	@	4
Rue	13	@	16
Sage, Italian, picked	3	@	5
Savory	3½	@	5
Scull cap	12	@	14
Senna, Alex, whole leaf	21	@	25
half leaf	9	@	15
siftings	6	@	7
Tinnevelly	6	@	12
Stramonium	5½	@	6
Thyme	3	@	3½
Uva ursi	3½	@	5
Witch hazel	4	@	5
Wormwood, foreign	6½	@	7
Yerba santa	12	@	15

Roots.

Aconite, German	8½	@	9½
Alkanet	5½	@	6
Althea, whole	12	@	13
cut	19	@	20
Angelica, German	11	@	13
American	—	@	15
Arnica	8½	@	9
Arrowroot, Bermuda	35	@	40
St. Vincent, bbls	7½	@	8
Belladona, Atropa	9	@	10
Berberis aquifolium	8	@	10
Bitter	13	@	15
Blood	15½	@	16
Blueflag	—	@	8
Byronia	8	@	9
Burdock	5	@	6
Calamus, bleached	30	@	35
unbleached	7	@	8
Cohosh, black	3½	@	4½
blue	—	@	5
Colchicum	8½	@	9
Colombo	4½	@	8
Culvers	9	@	9½
Dandelion, German	8½	@	9
Doggrass	5¾	@	6¼
Galangal	6	@	6½
Gelsemium	5	@	5½
Gentian	4¾	@	4¾
Ginseng, Southern	4.75	@	5.00
Northwestern	5.50	@	6.00
Eastern	6.50	@	7.00
Ginger, Jamaica, unbleached	9¼	@	10¼
bleached	11	@	13
Golden seal	74	@	75
Hellebore, white	5	@	5½
black	4½	@	5
powdered	6	@	7
Hydrangea	6	@	6
Ipecac, Rio	1.30	@	1.35
Cartagena	1.15	@	1.18
Jalap	9	@	10
Kava kava	13	@	14
Lady slipper	18	@	20
Licorice, in bales	3½	@	4
selected, bundles	6	@	10
Lovage, American	75	@	85
German	12	@	16
Mandrake	10	@	11
Musk, Russian	12½	@	13
Orris, Florentine, bold	8	@	9
small	6	@	7
Verona	4	@	5
fingers	60	@	65
Pareira brava	11	@	12
Pellitory	12	@	13
Pink	17	@	18
Pleurisy	10	@	12
Poke	4½	@	5
Rhatany	11	@	12
Rhubarb, Canton	35	@	40
Shensi	65	@	70
high dried	20	@	25
clippings	12½	@	47½
Sarsaparilla, Honduras	24	@	26
Mexican	9	@	9½
Senega, Southern	—	@	75
Western	74	@	75
Serpentaria	41	@	43
Skunk cabbage	7½	@	10
Snake, Canada	11½	@	22
Virginia	43	@	45
Squaw vine	7	@	8
Stillingia	5	@	6
Stone	5	@	6
Squill	3½	@	3¾
Unicorn, false	28	@	30
true	—	@	20
Valerian, German	15	@	16
Belgian	5½	@	6
English	18	@	20
Wild yam	5	@	6
Yellow dock	—	@	6
Zedoary	9	@	10

Seeds.

Anise, Italian, sifted	8	@	8½
Spanish	8	@	8½
German	5	@	5½
star	14½	@	17
Canary, Sicily	4¾	@	5
Smyrna	4½	@	4¾
Caraway, Dutch	4½	@	5
Cardamoms, bleached	35	@	60
decorticated	32	@	35
Celery	8	@	9
Colchicum	40	@	42
Conium	7	@	7½
Coriander, natural	3½	@	3¾
bleached	3¾	@	4
Cummin, Malta	6	@	7
Fennel, German	10	@	12
Italian	5	@	5¼
Flax, per bbl	6.50	@	6.75
ground, per lb	3½	@	4
Fenugreek	2¼	@	2½
Hemp, Russian	2¾	@	2¾
Larkspur	38	@	45
Lobelia	45	@	50
Millet, natural	1¾	@	1¾
shelled	3½	@	3¾
Mustard, brown, Bari	4½	@	5
California	4	@	4¼
German	3	@	3½
Sicily	4½	@	5
yellow, California	4	@	4¼
German	3¼	@	3½
Poppy	5¾	@	6
Pumpkin	12	@	—
Quince	35	@	40
Rape, English	4	@	5
German	2¾	@	2¾
domestic	2¾	@	3
Sabadilla	14	@	16
Stavesacre	9	@	10
Stramonium	—	@	9
Strophanthus, Kombe	80	@	90
Hispidus	42	@	45
Sunflower	2¾	@	2¾
Worm, Levant	14	@	15
American	15	@	16

Shellac.

D. C.	70	@	—
Diamond I.	63	@	—
V. S. O.	63	@	—
Fine Orange	56	@	57
T. N.	52	@	53
A. C. Garnet	45	@	46
Button	45	@	56
Bleached	47	@	60

Spices.

Cassia, Batavia, No. 1	℔ lb.	18 @	19
Batavia, No. 2		12½@	12½
China mats		8½@	9
cases		10½@	10½
broken		2½@	8
Saigon, rolls		48 @	52
broken		31 @	33
buds		15¾@	16
Cloves, Amboyna		16 @	16½
Zanzibar		15½@	15½
stems		5½@	6
Ginger, Calcutta		5¾@	6
Cochin		6 @	7¾
African, No. 1		6¼@	6½
Mace, Banda, No. 1		58 @	60
Batavia, No. 2		50 @	51
Penang, No. 2		53 @	54
Nutmegs, 105's to 110's		27 @	28
Pepper, black, Acheen		11¾@	12
Lampong		12 @	12¼
Singapore		12½@	12¾
Tellicherry		13 @	13½
white, Penang		19 @	19½
Singapore		19¼@	19½
red, Japan		13 @	13½
Zanzibar		16 @	17
Pimento, No. 1		7½@	8
grinding		7 @	7½

Chemicals.

Heavy Chemicals.

Alkali, 48 per cent	℔ 100 lbs.	80 @	87½
ammonia, high test		72½@	97½
Bleach, over 35 per cent		1.25 @	1.30
Salt cake, glass makers		82½@	85
Soda ash, carb, 48 per cent		— @	—
high test		90 @	95
Soda, bicarb, English		3½@	6
American		1.30 @	1.70
Soda, caustic, domestic,	℔ 100 lbs.		
60 per cent	℔ 100 lbs.	2.75 @	3.25
70 per cent		1.75 @	1.80
74 per cent		1.75 @	1.80
78 per cent		1.75 @	1.80
foreign, 60 per cent		— @	—
70 per cent		— @	—
74 per cent		— @	—
76 per cent		1.90 @	1.95
Soda, caustic, powdered, granulated.			
60 per cent	℔ 100 lbs.	2.75 @	3.25
70 per cent		2.87½@	3.25
Sal, English		67½@	72½
American		60 @	70

Acids.

Acid, acetic	℔ 100 lbs.	1.80 @	4.25
chemically pure	℔ lb.	20 @	21
oxalic		5 @	5½
pyroligneous		9 @	10
sulphuric, 60 deg.	℔ 100 lbs	1.20 @	1.30
66 deg.		1.30 @	1.40
bulk 50 deg.		15.00	@18.00
muriatic, 18 deg.		1.50 @	1.60
20 deg.		1.60 @	1.70
22 deg.		1.75 @	2.00
aqua fortis, 36 deg.	℔ lb.	4½@	4¾
38 deg.		4¾@	5
40 deg.		4¾@	5¼
42 deg.		5¼@	5½
nitric, 36 deg.		4¾@	5
38 deg.		4¾@	4¾
40 deg.		5 @	5¼
42 deg.		5¾@	6
tartaric crystals		31¼@	31½
powdered		31½@	31¾

Miscellaneous Chemicals.

Acetate of lime, gray	℔ 110 lbs.	1.40 @	1.45
brown		85 @	90
Alum, lump	℔ 100 lbs.	1.75 @	1.85
ground		1.85 @	1.95
powdered		3.00 @	3.25
Aq. am'ia (in dms) 16 deg.	℔ lb.	3½@	3½
18 deg.		3½@	3¾
20 deg.		4 @	4¼
26 deg.		5 @	5¾
Ammoniac, sal, gray		5½@	6
granulated		5¾@	6
lump		9½@	9¾
Ashes, pot, 1st sorts	℔ lb.	6½@	7
pearl		6½@	7
Argols, pipes	℔ lb.	— @	—
red		3¾@	—
Arsenic, white		3½@	3¼
red		6½@	6¾
Brimstone, crude, 2ds	℔ ton.	22.00	@22.50
3ds		21.50	@22.00
Cream tartar, crystals, p. c.	℔ lb.	24½@	24¾
powdered, 90 p. c.		24½@	25
Chlorate of soda		6¾@	7½
Chloride of calcium, 75 p. c.		75 @	90
Copperas		52½@	65
Glauber salts		80 @	85
Nitrate of lead		6½@	6¾
Potash chlorate		6¾@	7
powdered		6¾@	7½
carb		4 @	4½
caustic		6½@	6½
Sugar of lead, brown		6¾@	7
white		8¾@	8¾
Saltpeter, crude		3.40 @	3.60
refined		4¼@	5¼
Sulphate, alumina		1¾@	1¼
Vitriol, blue		4¾@	5¼

Fertilizer Materials.

Ammoniates.

Ammonia, sulphate, gas,	℔ 100 lbs.	3.17½@	3.20
bone		3.07½@	3.10
Fish scrap, dried, 11 p. c. ammonia and 15 p. c. bone phosphate f. o. b. fish works	℔ ton.	2.45 &	10
wet, acidulated, 6 p. c. ammonia f. o. b. fish works		2.20 &	35
ground		31.50	@33.00
Azotine	℔ unit.	2.60 @	2.65
Tankage, 9 and 20 p. c., f. o. b. Chicago	℔ ton.	2.15 &	10
Tankage, 8 and 20 p. c., f. o. b. Chicago		2.17½&	10
Tankage, 7 and 30 p. c., f. o. b. Chicago		15.00	@16.00
Tankage, 6 and 35 p. c., f. o. b. Chicago		14.00	@15.00
Garbage tankage		8.00 @	9.00
Dried blood, 12-13 p. c. ammonia f. o. b. New York		2.45 @	2.50
Dried blood, high grade, f. o. b. Chicago		2.45 @	2.50
Nitrate of soda	℔ 100 lbs.	2.20 @	2.25
future		2.20 @	2.02½

Phosphates.

Acid phosphate		60 @	67½
Phosphate rock, f. o. b. Char'n.		5.00 @	7.00
Tenn.		3.50 @	4.50
Bones, rough	℔ ton.	17.00	@19.00
ground, steamed		20.00	@24.00
ground, raw		23.00	@27.00
Bone black, refuse		16.00	@20.00
So. Carolina phosphate rock, ground, per 2,000 lbs., f. o. b. Charleston		6.50 @	7.75
So. Carolina phosphate rock, undried, f. o. b. Ashley River, per 2,400 lbs.		3.50 @	3.75
do. dried		3.75 @	4.00

Potashes.

Muriate potash, 80 p. c., spot,	℔ 100 lbs.	1.88 @	1.91½
Muriate potash, 80 p c., future		1.83 @	1.86½
dbl. m're salt		48@53% 1.12 @	1.15
Sulphate potash (basis 90 p. c.)		2.11 @	2.14
Sylvinit, 30@36 p. c.	℔ unit	.39 @	.40
Kainit, in bags		10.05	@10.55
Kainit, in bulk		9.05 @	9.55
Kieserit		7.00 @	7.25

Dyestuffs.

Acetate of soda	℔ lb.	4 @	4½
Acid, gallic		45 @	47
picric, best crystals		28 @	35
tannic, commercial		30 @	35
crystals		50 @	55
Albumen, egg		43 @	60
blood		13½@	18
Alizarine, red		15½@	16
assistant		23 @	27
Aniline oil		9 @	9½
salt, crystals		8¼@	8½
Annatto		— @	14
fine		25 @	28
seed		— @	3½
Antimony, oxymuriate		4 @	5
salt, 65%		16 @	16½
47%		13 @	13½
Bichloride of tin, 50°		9 @	9¼
60°		12¼@	12¾
Bichromate of potash, American		8½@	9
Bichromate of soda		6¼@	6½
Bisulphate of soda		1½@	2
Carmine of indigo		60 @	70
Cochineal, Teneriffe, silver		48 @	52
black		45 @	50
gray black		54 @	—
Cudbear, French		12 @	15
concentrated		23 @	24
English		10 @	15
Cutch, mat		4 @	5
boxes		4½@	7
refined, in boxes		6 @	7
slabs		6 @	8
Dextrine, imported		5½@	6
corn		3 @	4
Divi-divi	℔ ton.	35.00	@40.00
Flavine	℔ lb.	23 @	40
Fustic, stick	℔ ton.	16.00	@20.00
young root		31.00	@35.00
Gambier	℔ lb.	5¼@	5¾
cube No. 1		7 @	7½
cube No. 2		6½@	7
Garancin		6 @	7
Hypo. of soda, Am., bbls	℔ cwt.	1.60 @	1.65
kgs		1.70 @	1.95
German, cks		1.70 @	2.00
kgs		1.90 @	2.30
Indigo, Bengal, low grade	℔ lb.	60 @	67½
medium		70 @	80
high grade		85 @	1.05
Kurpahs, medium to good		55 @	60
higher grade		65 @	75
Guatemala		55 @	75
Manila		48 @	55
Madras		46 @	50
J. (synthetic)		21½@	23
Indigotine		95 @	1.80
Logwood, stick	℔ ton	15.00	@22.00
roots		15.00	@16.00
Madder, Dutch	℔ lb.	8 @	10
French		6 @	7
Myrabolams		2¼@	2½
Muriate of tin, 32°		9 @	9¼
52°		15 @	15¼
Nitrate of iron, commercial		1¼@	1½
true		4 @	4½
Nutgalls, blue Aleppo		14 @	14½
Chinese		13½@	14
Persian berries		6 @	7
Prussiate of potash, yellow		15 @	—
red		37½@	38
Prussiate of soda		10¼@	10¾
Phosphate of soda		2¾@	2¾
Quercitron	℔ ton	18.00	@20.00
Sago flour	℔ lb.	1¾@	2¼
Salts of tartar		5½@	6
Silicate soda		1 @	1¼
Soluble oil, 50%		6½@	6¾
75%		11 @	11¾
Starch, corn, pearl, in bbls		1.80 @	2
in bags		1.70 @	1¾
potato		4 @	5
rice		6½@	7
wheat		4 @	5
Stannate of soda, 50%		20 @	—
Sumac, Sicily, No. 1	℔ ton.	45.00	@50.00
No. 2		44.00	@45.00
Virginia		38.00	@40.00
Tapioca flour	℔ lb.	2¼@	2¾
Tartar emetic		20 @	21
Tin crystals		20 @	21½
Turmeric, Bengal		3¾@	4
Aleppe		5 @	5½
Chinese		— @	—
Coringa		4 @	4¼
Turkey red oil		6 @	7
Vanadiate ammonium	℔ oz.	60 @	61
Zinc dust	℔ lb.	5 @	—

Chipped Dyewoods, Etc.

Barwood	℔ lb.	2 @	2½
Camwood		6 @	7
Fustic		1½@	2
Hypernic		3 @	3¼
Logwood		1¼@	1¾
Red sanders		2¾@	3¼

Extracts.

Archil, double	℔ lb.	8 @	13
concentrated		9 @	15
Barberry, French		22 @	28
Chestnut		2½@	3
Oak		3 @	3½
Hemlock		2¾@	3
Fustic, solid		8 @	11
liquid, 51°		6¼@	10
Gall		12 @	15
Indigo		7 @	12
Logwood, solid		6 @	12
liquid, 51°		5 @	10
42°		4 @	6
crystals		10 @	15
Quebracho, solid		4¾@	5
51°		3 @	3¼
42°		2¾@	3
Persian berry		9 @	15
Sumac		3½@	7

Comparative Prices.

On Jan. 4, 1901, 1902 and 1903.

Chemicals.	1903.	1902.	1901.
Bleaching powder	$1.00	$1.75	$1.90
Brimstone, 3ds	22.50	22.50	19.25
Caustic soda, 70 p. c.	2.87½	1.90	1.80
Caustic soda, 60 p. c.	2.60	1.95	1.85
Sal soda, Am.	.60	.55	.50
Soda, ash, 48 p. c. carb.	—	—	—
Soda, ash, 48 p. c. s'st'c	—	—	—
Soda, alkali, 48 p. c.	.90	.95	.85
Soda, nitrate	1.95	1.97½	1.82½
Cream tartar, crystals	.22¾	.19½	.21
Muriate of potash	1.80	1.83	1.83
Chlorate of potash	.07	.07¾	.08½
Kainit	9.05	9.05	9.05
Paints.			
White lead in oil	.05½	.05½	.06¼
Litharge, Am., pow'd	.05	.04½	.06
Paris green	.12½	.12½	.12¾
Orange, mineral	.07¾	.08	.08
Ven. red, English	1.80	1.80	1.80
Ven. red, American	.50	.80	.80
Barytes	17.00	17.00	17.00
Whiting, commercial	.40	.40	.42
Drugs.			
Opium	2.72½	3.05	3.45
Morphine, domestic	1.90	1.90	2.00
Quinine	.26	—	—
Alcohol	2.45	2.55	2.45
Borax, city	.07¼	.07¼	.07¼
Beans, tonka (Ang.)	.65	.75	.70
Cubeb, XX	.08	.10	.10
Cuttlefish	.19½	.21	.25
Glycerine, C. P., drums	.14½	.14½	.15
Oil, castor, city	.10¾	.12	.12½
Oil, cassia	.75	.70	.80
Oil, codliver, Nor	52.00	22.50	23.50
Oil, peppermint, tins	4.75	1.80	1.10
Oil, sassafras	.40	.39	.40
Quicksilver	.64	.66	.67
Asafoetida	.20	.26	.25
Gum arabic, sorts	.08½	.11	.14½
Camphor, bbls.	—	—	.60½
Shellac, D. C.	—	.37	.30
Senna, Alex, Nat'l	.21	.21	.23
Senega root	.65	—	—
Ipecac	1.65	2.60	2.60
Jalap	.12	.12½	.14
Canary seed, Smyrna	.05	.03	.02½
Caraway seed, Dutch	.05	.05¼	.07½
Mustard seed, Cal., yel.	.04¼	.04¾	.06
Rapeseed, German	.03	.03½	.06¾
Oils.			
Cottonseed, prime, S. Y.	.39	.41	.29
Olive, Sicily	.53	.57	.57
Cocoanut, Ceylon	.06¼	.08	.05¾
Lard, prime, city	.87	.79	.65
Linseed, domestic	.46	.55	.56
Menhaden, prime, cde.	—	—	.26
Whale, bl'ched, winter.	.48	.48	—
Sperm, bl'ched, winter.	.78	.78	.60
Oil cake, Western	26.50	28.50	27.00
Spirits turpentine	.55	.39¾	.40½
Dyestuffs.			
Bichromate potash, Am.	.08¼	—	.08¾
Cochineal, Teneriffe, S.	.17	.17½	.18
Cutch, bag	.05	.04½	.05
Gambier	5.75	7.00	4.12½
Indigo, Bengal, h. gde.	.90	.85	.85
Prussiate potash, yel.	.13¾	.13¾	.15
Starch, corn	2.27	2.18	1.52½
Sumac, Sicily, prime	46.00	50.00	55.00

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Casks, Barrels, Kegs and Seven Pound Bags.

DRUG MARKET.

NOTE.—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on pages 30 and 31.

Saturday Evening, Jan. 2, 1904.

ADVANCED.	DECLINED.
Wood alcohol, 5c.	Opium, 2½c.
Canauba wax, ½c.	Japan wax, ¼c.
Glucose, 10c.	Chicle gum, 2c.
Dynamite glycerine, ¼c.	Dandelion root, ¼c.
Cassia oil, 2½c.	
Citronella, 2c.	
Seidlitz mixture, 1c.	
Rochelle salts, 1c.	

Opium.

The situation is slightly easier, under the flat state of the market, and there is now little doubt that $2.92½ for cases is the basis on which sales can be made. This quotation is made in several quarters, but there are many who continue their views at $2.95 for cases, and up to $3 for broken lots. Powdered is nominal at $2.55@2.65, as to test, quantity and seller. The markets abroad are quiet and without change. We have the following advices by cable:—

Smyrna, Dec. 28, 1903.

The market is quiet, without change.. Arrivals to date, 1,654 cases.

Smyrna, Jan. 2, 1904.

The market is quiet, with sales of five cases at 7s. 3d.@7s. 6d. Arrivals are 1,670, as against 4,675.

Constantinople, Jan. 2, 1904.

There have been sales of 1 case of druggists at 7s. 6d. and eight cases of soft goods at 10s. 11d. The market is firm.

Smyrna, Jan. 2, 1904.

The market is quiet, without change. Arrivals to date are 1,669 cases.

We also have mail advices as follows:—

Constantinople, Dec. 18, 1903.

The higher prices recently cabled have had the effect of limiting the demand, but Karahissar in general is held at 8s. 1d.@8s. 2d.

Constantinople, Dec. 18, 1903.

The market keeps steady at last named prices and about 43 cases have changed hands at 7s. 7d. for good druggists' to 7s. 10d. for Karahissars. Very little opium remains inland, and there will be no arrivals to replenish stocks reduced by shipments.

Smyrna, Dec. 12, 1903.

There has been a marked activity in opium this week, sales footing up 218 cases, most of which are for American account. The low level prices reached has at last stimulated business and buyers seem to have understood that the proper time for them to operate has now set in. After the improved demand witnessed this week the market is characterized by a much better feeling and prices are well maintained. The sales we report have been effected at 7s. 8d. for new current drug and at 7s. 9d.@8s., cost and freight, as to quality, for old druggists' sorts. Arrivals to date amount to 1,643 cases as against 4,638 for the corresponding period last year.

Quinine.

There have been some fair movements of goods in second hands, and stocks in these quarters have been considerably reduced. It is true that the end of the year has had some influence in closing out some lots which holders did not want to carry over. Sales of Java at a fractional concession from the openly quoted price of 22½c. in second hands are reported, but these have no market reflection upon the fully maintained statistical strength of quinine in general. The turn of the year is now awaited with more manifestations of confidence, for the season is fast approaching when the demand should assume a volume commensurate with the heaviest consumption. The bark shipments from Java to Europe during December were somewhat larger than those of the previous month, but by no means excessive. The following table gives the total for the last three years:—

	1903.	1902.	1901.
	Dutch Pounds		
January	592,000	940,000	1,120,000
February	655,000	520,000	748,000
March	1,050,000	690,000	874,000
April	1,074,000	1,000,000	800,000
May	1,160,000	1,044,000	746,000
June	1,220,000	1,200,000	1,048,000
July	1,236,000	1,027,200	1,240,000
August	1,100,000	1,856,000	1,050,000
September	1,396,000	958,000	1,232,400
October	2,012,000	1,680,000	1,576,000
November	996,000	956,000	1,185,000
December	1,182,000	1,305,000	1,300,000
Totals	13,673,000	13,176,200	12,909,400

We have the following from our Amsterdam correspondent giving further details of the last bark sale:—

Our yesterday's auction consisted of 7,453 bales and 440 cases, about 714,027 kilos Java cinchona bark, containing about 33,201 kilos of sulphate of quinine, of which 147,512 kilos were druggists' bark containing about 3,256 kilos and 566,515 manufacturing bark, containing about 29,945 kilos sulphate of quinine, as per analysis published. The average percentage of the manufacturing bark, therefore, is 5.30 per cent., against 5.30 per cent. in the November auction and 5.51 per cent. average of the ten auctions in 1902.

According to the kinds the participation was as follows: Succirubra, 147,009 kilos; Ledgeriana, 444,066 kilos; officinalis, 16,830 kilos; Schuhkraft, 503 kilos; hybrids and other kinds, 105,619; whereof 92,635 kilos were root bark.

The barks consisted of 38,342 kilos of government bark and 675,685 kilos of private bark. The average unit was 7.35 Dutch cents against 7.45c. in the November auction. Of the 29,945 kilos sulphate of quinine offered, 1,340 kilos could not find buyers; of druggists' bark there was a good demand, and of the offered 3,256 kilos sulphate of quinine only 270 remained unsold. The next auction will be held here Jan. 28 next.

Miscellaneous.

ACETANILID.—A quiet but steady seasonable outlet is manifested, aggregating a fair volume of business. Quotations are firm at 20½c. for 2,000-lb. lots and 21c. for smaller quantities.

ACID, CITRIC.—The demand is seasonably quiet and competition quite as keen as ever. Prices for the domestic continue 32c. for barrels and 32½c. for kegs. Our Messina correspondent sends the following:—

Messina, Dec. 16, 1903.

Citrate of Lime.—While business has not been of a very extensive volume during the past fortnight, orders have been booked at £13 for December shipment and £12 17s. 6d. for January to February. Buyers do not now show any anxiety to get further contracts and in consequence there is a decline to be reported. Quotations of to-day are:—£12 17s. 6d. for December and £12 15s. for January to March.

ACID, SALICYLIC.—The market presents no new features and the demand is not at all active. We quote the following:—1,000 lbs., 31c.; less than 1,000 lbs., 32c.; less than 100 lbs., 34c.

ALCOHOL.—The development that has been awaited for several weeks, since manufacturers of wood alcohol were known to be unwilling to make contracts for the new year at recently prevailing prices, reached its climax this week with an advance of 5c. per gal. in both the 95 and 97 per cent. grades. This brings the market to 55c. for the former and 60c. for the latter. The larger fields for consumption have encouraged manufacturers to this step. Columbian spirits remain unchanged at $1.25 per gal. Grain alcohol remains steady under fair demand at $2.46@2.48 per gal., less the usual rebate for cash in ten days.

BAY RUM.—While the demand is light, the season's business has been of a satisfactory volume. The Porto Rico commands all the attention and is quoted at $1.75@2.25 in barrels. The duty on the St. Thomas keeps it out of the local market.

BEESWAX.—Conditions are unchanged, but the trend of the market is, in general, satisfactorily firm at the following prices:—White, pure, 40@42c.; yellow, crude, 29@29½c.; yellow, refined, 32@34c.

CAFFEINE.—The decline of 10 per cent. in manufacturers' price abroad, noted last week, has shown no effect on this market, which is quite independent of the foreign. Competition here has been the means of some uncertainty as to the near future. Present prices remain at $2.50@2.65, as to quantity.

CANTHARIDES.—Both the Russian and Chinese varieties are firm, especially in the whole flies. For the whole Chinese 37½c. is an inside quotation and this would probably be given only for small lots, dealers, in general, expressing a confidence in higher values. Powdered Chinese are held at 42½@45c. Russian whole flies are quoted at 72½@75c. and powdered at 75@80c.

CARNAUBA WAX.—The outlook continues promising under the conditions reported in detail last week. The demand for the various grades seems to be increasing and stocks are likely to prove insufficient. The market on Flor is at 23½@24c., and there is nothing of No. 2 to be offered. No. 1 is held at 23½@24c., No. 3 at 21@21¾c. and north country at 21½@22c.

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CINCHONA BARK, High Test	MENTHOL	TINNEVELLY SENNA
CANADA BALSAM, True	MANNA	OREGON BALSAM
SARSAPARILLA ROOT	OPIUM	COD LIVER OIL
CASCARA SAGRADA	ERGOT	COCA LEAVES

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KALAMAZOO, MICH., U. S. A.

flicting rumors of unsettled conditions and higher tariff assessments, there has been no change nor is there any likelihood of any in the price of this article. If there has been any tariff decision of late which might be applied to it, it would tend to confirm the views of local holders as to the validity of the duty which has been in force right along.

COCAINE.—Persistent rumors have been current during the week that the manufacturers' price of $3.50 for bulk had been shaded in one quarter to $3.40, at which sales were said to have been made. The accredited source of this concession not only denied the reported sales, but asserted that his price was that of other holders, $3.50. The demand has been light. In view of the price of coca leaves, the position of cocaine is very unsatisfactory.

COCOA BUTTER. — Holders report exceedingly light supplies, but the demand is seasonably quiet and prices remain at 28@28½c. for bulk and 33@34c. for 12-lb. boxes. The next Amsterdam sale will be held on Jan. 5 and will include 80 tons of Van Houten, 11 tons of de Yong and 5 tons of Mignon.

CODLIVER OIL.—Unsettled conditions have created an easier feeling, but the market is not as weak as some of the rumors would seem to have it. All sorts of prices have been reported for the Norwegian, the extreme being reached when one of $90 was circulated. This proved without foundation, but we hear with authority that one standard grade is still available at $105 per barrel. This is probably an inside quotation for oil of standard quality. For the Newfoundland the quoted range extends from $2.50@3.25 per gal.

CUTTLEFISH.—Stocks of jewelers', large and small, are meagre and well concentrated, and the tone of the market is firm at 54@55c. for the small and 52@54c. for the large. Trieste is fairly steady at 15@16c.

ERGOT.—For the Spanish and Russian grades we hear of nothing of standard quality below 35c., while some holders maintain firmer views up to 40c.

FORMALDEHYDE.—While nothing is openly quoted below 12½c. spot, the market is unsteady as to values and an understanding among manufacturers would be a welcome relief from the reported concessions one hears nearly every day. Little credence is now placed upon them and since their generally fictitious nature has been pretty well established, some of the dealers declare a better feeling over the outlook. We have faith in the statement that the 10c. price was named only for large requirements under contract for an extended period.

FUSEL OIL.—There have been some fairly large arrivals of late, but not enough to relieve the situation. The supplies will be readily taken up to fill long-waiting requirements. For the crude $1.15 is named and the refined is held at $1.30.

GLUCOSE. — Announcement was made on Monday of an advance of 10c. per 100 lbs. in all glucose products, bringing the price of 42 deg. to $1.70 for carload lots at New York. The higher tendency of corn is believed to have affected the glucose market.

GLYCERINE. — The effect of the firmer tone abroad is still unnoted here, for refiners are accustomed to buy for months ahead and have as yet sufficient supplies to maintain their selling price at 14¼@15c. for C. P., bulk, plus the cost of drums and bbls. Dynamite glycerine shows a still firmer trend and fair sales have been made at 12⅞c., on which basis the market now rests. Our Paris correspondent sends the following by mail:—

Paris, Dec. 18, 1903.

Our glycerine market remains very firm this week, and large transactions have been consummated, chiefly for European consumption. We foresee an advance in prices. Quotations are:—Saponification, 112 frs.; soap lye, 93¼ frs., per 100 kilos, c. and f. New York.

JAPAN WAX.—The market has become a little easier through lack of demand, which the strained relations in the producing country doesn't seem to have affected. It is now openly quoted at 15c., with some holders still firm at 16c.

MENTHOL. — Inquiries during the week have established the stability of the market at $5.25, at which price a number of cases have changed hands. No higher range is looked for, because Japan still retains large stocks and nothing short of a crisis in her relations with Russia would tend to a withdrawal of offerings, it is believed. Shipments for delivery over February-March are quoted at $5.10.

ROCHELLE SALTS.—Following the advance of the raw material, the price of Rochelle salts was advanced on Saturday 1c., bringing the market to 21c. for 5-barrel lots, and 21½c. for smaller quantities.

SALOL.—There is nothing in the recent tariff decision, of which mention will be found elsewhere in this issue, to affect market values, for the decision of the court affirms the duty of 55c. per lb. as an alcoholic preparation, which view has been generally maintained here.

SEIDLITZ MIXTURE. — Announcement was made on Saturday of an advance of 1c. in the price of seidlitz mixture, because of the higher market for the crude material. New prices are 17½c. for 5-barrel lots, and 18c. for smaller quantities.

SUGAR OF MILK.—A steady consumptive demand prevails for the powdered and prices are well sustained on the basis of 14½@15c., as to quality, quantity and seller. The cob is in very slight request.

VANILLIN. — The firmness with which this item has been recently held is fully maintained in sympathy with the upward tendency of the raw material. The prevailing quiet tone of the market keeps values at the old range of 55@60c., as to quality and holder.

Balsams.

Contract deliveries and jobbing transactions constitute the only movements under this head, and while scarcity marks the leading items there is little likelihood of any change in values in the immediate future. Canada and Oregon fir will be the first to respond to higher prices because of the depletion of supplies in the producing districts.

Styrax is in fair demand at 13@14c.

Barks.

Cascara sagrada continues to gain statistical ground on advices from the Pacific Coast, but the lack of demand here tends toward a maintenance of values in which large holders find little attraction for sales. New bark is still available at 14c., while the old is held in some quarters up to 18c.

The near arrival of the new crop of cottonroot bark may have the effect of easing the market, but for the present 12c. is an inside quotation. Even at this figure holders do not seem attracted to offer very bounteously. The new root usually arrives during December, but the lateness of the cotton crop is responsible for the delay.

Cramp bark, which has been somewhat neglected of late, is now commanding more attention on account of the shortness of supplies, and at 6@7c. the market is firm.

Select elm in bundles, of which we had occasion to note an advance of 5c. last week, is well sustained at its new value of 40c.

Prickly ash and sassafras are in light supply, but unaltered from the basis of 14@20c. for the former and 7½@10c. for the latter.

Wild cherry shows a stronger trend in view of the scant supplies. It is possible to find sellers at 5c., but many refuse to shade 6c. and up to 8c. is asked for finer qualities.

Beans.

A fair volume of jobbing transactions is reported for vanilla beans at the slightly easier range of prices noted last week. The better grades seem to be in more favorable regard, but there are still enough of the cheaper varieties to hold the bulk of trade. The tonkas and other beans listed are in very slight request, all at unchanged quotations.

Berries.

The various items on this list are generally quiet and without interest. Stocks of juniper berries are still ample enough to keep the price at 2¼c. The demand for cubebs has slackened off, but supplies abroad are still believed to be light and some further export movements are looked for.

Essential Oils.

The situation in the far East has directed attention to the oils which would be affected by a state of war. Purchases of anise, camphor, cassia and artificial sassafras oils are being insured with war risks and we may look for higher values on arrival. There is already in evidence a disinclination to stipulate a price on these oils in large lots.

Anise reflects a better feeling now and $1.12½ is maintained by a number of holders. There are still offers at $1.10.

There is quite a demand for camphor oil and a readier response to the conditions which have advanced the price of the gum is logical.

Holders of cassia at 70c. do not feel warranted in continuing the quotation and 72½c. is now generally named. The situation in citronella shows additional strength under the more discriminating attention as to the quality of the oil. For prime goods 26c. is an inside figure for drums, and case goods are proportionately higher.

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The enhanced values of cloves is influencing the market on the oil and holders are readjusting their quotations to meet the new conditions. For cases $1.05@1.07 is a minimum range and the bottles are held in some quarters as high as $1.12½.

The peppermint situation has improved somewhat by the sale of 2,000 lbs. at $2.65, bringing more holders to the $2.75 basis. What the turn of the year will develop is still a matter of conjecture.

Pure natural sassafras is very light and firmly held in most quarters at 55@60c. The artificial, likewise, shows a better state and is in active demand at 29@31c. Three sales during the week aggregated 15,000 lbs. at full values. Our Messina correspondent writes as follows:—

Messina, Dec. 13, 1903.

Since our last review of November 25 the market for oil of lemon has been featureless, and the absence of any demand of im-

portance has caused prices to remain practically stationary. The new oil is now on the market, but there are few purchasers. It is unquestionable that this article is the most demoralized just now, in consequence of a very keen competition, in addition to the still increasing output of the production. The price of sweet-orange oil has advanced, due to the fact that stocks have been already concentrated in the hands of strong holders, and some large quantities are being deposited in the various banks by way of speculation. However, it is only the needy shippers who may be forced to buy, whereas foreign consumers are not willing to order at the present rates. The fact is that the disparity in the view of buyers and sellers has restricted business. As to bergamot, the tendency is downward, owing to the little export demand just at present, and there is no disposition to contract future delivery at the present prevailing prices, as the opinion is general throughout the trade here that a higher market will prevail as soon as the manufacturing is over, and the speculating elements set in as usually. This has been fully experienced for several years in the past. We quote to-day as follows:—Lemon, 2s. 1d.; sweet-orange, 6s.; bergamot, from 6s. 6d.@6s. 9d. per lb., c. i. f., as to grades and quantities.

Messina, Dec. 29, 1903.

There has been here a further advance in price of sweet orange oil, but the improved feeling is due entirely to speculative transactions, and not to any increase in the local business. One reason for this firmness is that weak holders were not forced to sell in order to obtain ready money, because some dealers here have been willing to make liberal loans on the article, which has been deposited in their hands. The result is that shippers, who have engagements to fulfill immediately, are compelled to enter the market at the highest figures, whereas most holders are for the present not sellers; in some cases they are buyers themselves, and others, wishing to profit by this movement, are asking very high prices. I am not prepared yet to express an opinion as to what the position of the future market will develop, but it is obvious that the future course of prices will chiefly depend on the extent of the next export demand. As regards lemon and bergamot, the market remains the same as outlined in my last review. Prices are consequently unchanged in the absence of any important business to test the market.

I quote to-day:—Lemon, 2s.@2s. 1d.; sweet orange, 6s. 2d.@6s. 4d.; bergamot, 6s. 6d.@6s. 9d., as to grades and quantities.

Flowers.

Stocks of arnica flowers are almost taken up by jobbing hands and first hands are short. The market, in consequence, is firm and prime goods are generally held at 9½c., although we believe 9c. is still possible for good qualities.

Chamomile flowers are not active and little movement of consequence is looked for until the approach of spring.

Lavender flowers are more favorably regarded on stronger advices from abroad, but under the present light demand prices show no change from the following:—Ordinary, 4½@5½c.; select, 6½@7c.; hand picked, 10@12c.

Competition still keeps the price for Valencia saffron 50c. below the estimated cost of importation, although the primary market again confirms the strength previously noted. American saffron continues firm under the same conditions.

Gums.

There has been no further change in refined camphor since our last report, and the local market is marked with much concern as to the outlook. Refiners are reluctant to contract for the future. The view is gaining ground that the Japanese Government is appreciating the value of the crude as a possible war asset and the strength of its position in continuing to withhold supplies pending the settlement of the question at stake. It is now three months since any offering of camphor was made, and even if any should be forthcoming soon after the turn of the year four months would be required to land it here.

The market on Curacao aloes seems to be nearing 4c., as the uncertainty as to the output continues. The present quotation of 3½c. is nominal. On the Prins Willem III., arriving Tuesday, were 259 cases of aloes.

Chicle continues irregular over the competition to effect sales. From two sources we get as low a range as 36@36½c. for invoice lots spot. In a small way 40@42c. is quoted.

London reports an easier feeling on tragacanth gums, under the slackened demand, but here the market is unchanged, the better grades being somewhat steadier.

Asafoetida is well regarded under a fair movement and a moderate supply in strong hands.

Herbs and Leaves.

Cannabis indica tops have been quiet, but no loss of the strong position, recently gained, is noted. Manipulation is said to have played a part in the advance, but London reports a rise to 4s. on the reduction of stock. The markets, in general, abroad are about depleted.

Coca leaves are unchanged at the firmly maintained values of 28@30c. for the Huanoco and 17@20c. for the Truxillo.

From the Pacific Coast come quotations up to 15c. for prompt shipment of damiana leaves, but abundant stocks keep the local market to a basis of 8@10c.

Henbane leaves are tending to better values and while 7@7½c. continues for common, as high as 15c. is asked for fancy goods.

A higher importation cost is announced for laurel leaves, but 3@3½c. remains the basis here under present conditions.

Large orders for Alexandria senna leaves have been declined in Egypt, owing to the shortness of the crop, but there is no reflection of this situation here. Stocks here are not excessive. The Tinnevelly varieties are firm at unchanged prices.

Roots.

Arnica root is steady at firmly maintained values of 8¾@9c.

German dandelion is available at 8½c., the arrival of new goods continuing to shade the price.

There is very little offering of blood root under the diminished supplies, and prices hold firm at 15½@16c.

From the West are reported sales aggregating 1,000 lbs. of senega at a price equivalent to 75c. here. In this market nothing is offered below 74c. The Winnipeg Commercial prints the following in its issue of December 19:—

Senega.—A few small lots are coming in from country merchants, who are cleaning up for the season. Prices are lower. Dealers are quoting 60c. per lb. for clean, dry root delivered here.

Large arrivals of Mexican sarsaparilla continue and the market is irregular, but for the present we may repeat our last price of 9@9½c.

Inquiry for selected licorice root has disclosed a scant supply and under a more active demand an advance is regarded as likely.

Gentian is firm and steady at 4⅝@4¾c.

Golden seal has been in fairly active request and our last quotation of 74@75c. is firmly maintained.

Our Leghorn correspondent sends the following on orris root:—

Leghorn, Dec. 16, 1903.

There has been recently some demand for orris root, but at exceptionally low prices. This article has now fallen down to such low limits that we cannot find any similar record in many previous years, and such limits cannot give any longer the possibility of business. The consequence has been that this year, especially in the Veronese provinces, the crop has been quite unimportant, as our producers did not find any reasonable compensation for digging the root. Should this state of things continue, next year there will be no production whatever of this article, and then it may be that a real improvement in its position will occur. Also in Florence and thereabouts, although the Florentine qualities are sold at somewhat better prices, the producers are all neglecting the article.

Seeds.

Caraway continues to gain strength on the basis of Rotterdam advices, and sales are reported at an advance of the present inside quotation of 4⅞c.

Coriander also shows a steadier trend. European cables denote a cost to lay down at 4¼c., but the local market is a little below that figure.

Celery is a trifle unsettled because of pressure to close out stocks, and while there are still holders at 8½c., it is said

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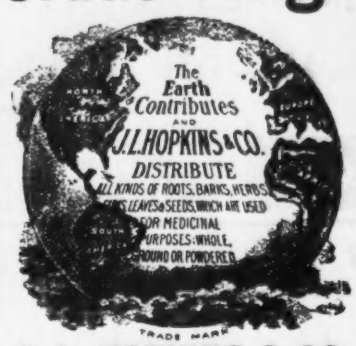

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GRANULATED AND POWDERED
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that 8c. has been shaded. This figure continues the nominal basis.

Sales of decorticated cardamoms are reported at 33c., but several holders offer goods at 32c.

Fenugreek is unchanged and rather dull at 2¼@2½c.

American wormseed is very firm at 15c. One holder states that he has 500 bbls. at this price, but when disposed of he would offer nothing below 16c.

Shellac.

The London and Calcutta markets have been without feature during the holiday week, but here a surprisingly fair volume of business has been transacted. Stocks are being materially reduced and arrivals are below the average. On the Manica and Simoon, now at Boston, and the Marienfels here, are 300, 600 and 150 cases, respectively, and the Palatinia is due on Monday with 2,000 cases. It is too early to form any idea as to the condition of the cargoes on the three vessels now unloading. There is very little free T. N. here. We are in receipt of the following from our Calcutta correspondent:—

Calcutta, Dec. 3, 1903.

Messrs. Rallie Brothers are buyers at about 118@119 rupees per C. B. md. for ready T. N., but there are no sellers forward at these quotations. There are 100 cases native orange reported at 125 rupees per md. Shipments for November show a total of 13,929 packages, as follows:—

	Orange.	Button.	Garnet.	Total Cases.
London	5,140	1,611	350	7,101
New York	4,194	188	200	4,582
Germany	1,269	458	425	2,152
Other ports	79	....	15	94
	10,682	2,257	990	13,929

Spices.

The week's interest has been centered in cloves, pepper and pimento, in the first two of which advances are noted. Zanzibar has cabled that there have been no receipts of cloves there during December and that nothing further might be looked for from the crop. There have been sales here of 500 bales at 15c., but the market is now on the basis of 15¼@15½c., while Amboyna is in upward tendency.

Sales of 300 tons of spot Singapore pepper cleaned out one holder who had been offering at 12¼c. From this the market advanced to 12½c.

Pimento is attracting more attention and higher prices are looked for on the strength of the extremely small crop.

(Special Cablegram to the Reporter.)

London Closing Prices.

London, Jan. 2, 1904.

Quinine spot is 12¼d.; March, 12½d. Shellac is 225s.

(Special Correspondence to the Reporter.)

The Hamburg Drug Market.

Hamburg, Dec. 15, 1903.

The drug market is rather quiet. Citric acid is higher, 25c. having been paid for crystals. Prime agar agar is scarce at 36½c., while seconds are more offered at 33@33½c. Russian anise seed is scarce at 5¼c., while levant is higher at 5c. and Chinese star is quiet at 13½c. Antimony has advanced, and 3c. is asked for Chinese crude. Camphor has risen to 49c. for refined German. Russian cantharides continue high at 78@79c. Ten cases of Chinese have arrived and are held at 39c. Lycopodium is steadier at 59@59½c., and higher prices are looked for. Ergot of rye is held with more confidence; 34c. has been bidden in vain, and 37@38c. continues for both Spanish and Russian. Ipecac is quiet and slight demand at $1.24 for Cartagena and $1.40 for Rio. Quotations are, as usual, c. and f. New York, without engagement.

(Special Correspondence to the Reporter.)

Hamburg Drug Market.

Hamburg, Dec. 22, 1903.

There is little of interest to be reported about the drug market, business being exceedingly small and dull. A lot of anise seed, levant, just arrived, has found a ready buyer at 4¾c. Camphor is firmer again. Lycopodium is in continued scarcity at 59½@60c. Ergot is quiet, though steady, and bids below 37@38c. will be refused. Ipecac is unchanged, Cartagena at $1.24 and Rio at $1.40.

(Special Correspondence to the Reporter.)

London Drug Market.

London, Dec. 19, 1903.

The coming holiday and the near approach to the close of the year have further reduced the small volume of business transacted of late, trade requirements having been of the very smallest requirements. Quinine is very quiet. Shellac is tending downward. Caffeine is lower. Cannabis indica is dearer, as is castorum. Ergot of rye is quiet. Gum arabic is neglected. Gum kino is rising. Tragacanth is easier inclined. Ipecac is unchanged. Star anise seed oil is lower. Cassia oil is flat, and peppermint oils are quiet.

Quinine has been very quiet during the week for B. & S., Brunswick and other foreign brands. The few sales include spot and December at 1s. ¼d. and March delivery at 1s. ½d. Since writing the above, quinine has weakened, spot being quoted at 1s. ¼d.

The market for shellac has also been quiet, and prices have been declining, with a steady spot business at the reduction. Ordinary T. N. orange has been sold as low as 230s. and fair T. N. orange down to 232s. Good to fine orange is in request, but scarce, and has realized 240s.@247s. 6d., according to quality. Free garnet has declined from 205s. to 200s. per cwt., and the demand for buttons has decreased, but prices are unchanged.

Caffeine has been reduced by English makers as follows:—Pure, 9s.@9s. 9d., and citrate P. B., 6s. 3d.@7s., as to quantity. Cascara sagrada is quiet, with no important sales, at 77s. 6d.@82s. 6d. per cwt., according to the age of bark. Cannabis indica has recently been sold at 3s. 3d., but, the available stock in London being now very much reduced, the price is advanced to 4s. for tops. The annual sales of castorum were held on the 16th inst., and 1,510 lbs. Hudson's Bay were offered and sold at higher prices than were paid last year. Firsts of various marks brought 64s.@68s.; moldy, 60s.@60s. 6d.; seconds of various marks, 48s.@58s.; moldy, 50s.; thirds of various marks, 32s. 6d.@51s.; moldy, 32s.@42s. 6d.; pickings, 23s. 6d.@44s. 6d., and trimmings, etc., 20s.@20s. 6d. There were also offered and sold 18 packages of Lampson's (imported from New York and Quebec) at the following prices:—Firsts, 62s.@64s. 6d.; seconds, 40s.@44s.; thirds, 30s.@30s.; pickings, 10s.@29s., as to quality.

Ergot of rye on the spot is quiet, and the prices for Spanish are 1s. 6d.@1s. 9d., as to quality and holder. Gum kino has advanced and is variously quoted up to 1s. per lb. Of gamboge from the last drug auctions further sales have been made at £15 per cwt. for unsorted Siam pipe. Gum arabic is in very slow demand, Australian, East Indian, Soudan and other descriptions being scarcely inquired for, and no public auctions were held this week. Gum tragacanth is quiet, and prices are not so firm as of late. Quotations are:—Firsts, £14@£14 10s.; seconds, £13@£13 10s.; thirds, £11 5s.@£12 10s.; fourths, £7 5s.@£9 10s.; yellow and pinky, £5 10s.@£7; inferior, £4 5s.@£5 per cwt. Ipecac is selling in small quantities at fractionally unchanged rates for mattogrosso, minas and Cartagena. Menthol crystals are steady but quiet at 19s. 6d. for Koboyaski. Among the essential oils, star anise seed is easier on the spot at 4s. 8d.@4s. 9d. Cassia is flat and lower, spot 70@75 per cent. at 2s. 9d.; 75@80 per cent., at 2s. 10d., and 80@85 per cent., at 3s. 1d. per lb. Citronella is very firm at 1s. 1d. for both tins and drums on the spot. Lemongrass on the spot is firmly held at 7d. per oz. Peppermint, American H. G. H., is quiet at 14s. 3d.@14s. 6d. spot, and Japan dementholized Kobayaski spot at 6s. 6d., and to arrive at 5s. 6d.@5s. 9d. Japan wax in good white squares is selling on the spot at 74s.@74s. 6d. per cwt.

OBITUARY.

Theodore W. Edwards.

Theodore W. Edwards, who had been identified with the firm of Schieffelin & Co. for nearly half a century, died suddenly early Friday morning from heart trouble. Mr. Edwards left his office apparently in his usual health about noon on Thursday to go uptown, where he remained until late at night. Leaving the elevated station at Cortlandt street for the ferry to Jersey City, where he lived, he evidently hurried to catch a boat and was stricken in the street. He was carried to a near by police station and medical aid was quickly summoned. Life was then extinct and the surgeon declared that death must have been immediate. Papers in Mr. Edwards' pockets gave some suggestion as to his identity, and through the police his family was communicated with. A son-in-law responded and confirmed the identification. Mr. Edwars was in his sixty-fifth year and entered the service of Schieffelin & Co. in 1855, winning his way, by gradual promotion, to the charge of the city buying department. He had a wide acquaintance throughout the trade, and many expressions of grief were heard Saturday morning when the news of his death was spread. Mr. Edwards was prominent in Masonic circles, holding a high degree in the order. He left a widow, two sons and a daughter. The funeral services will be held from his late residence, 347 Webster avenue, Jersey City, Monday afternoon.

(Special Correspondence to the Reporter.)

Chicago Seed and Oil Market.

Chicago, Dec. 31, 1903.

Chicago flax seed market has been practically lifeless the past week, few transactions being reported, but nominal values were considerably higher, in sympathy with the speculatively stronger markets in the Northwest. For the week ending yesterday, cash N. W. No. 1 advanced, and No. 1 and December advanced 1½c. May closed a half cent higher than a week ago at 99c., with a sale at that.

To-day Duluth was up to $1 for cash arrival, and December-May was $1.03¾ bid and July $1.04½. The market here advanced in sympathy, the bid prices at the close being $1.02½ for N. W. No. 1, 95½c. for cash No. 1 and December, and May $1.01. Receipts at the three markets keep up remarkably well and the movement indicates that there is still abundant seed in the interior. It is estimated that the movement to the three markets and to mills west of Chicago and Minneapolis direct has been in the neighborhood of 22,000,000 bushels. Last year about 8,000 bushels came to market between this time and the new crop, and the most moderate estimates are that we will receive 5,000,000 bushels from now on. Every evidence points to the fact that the market is under firm control. The leading interest has evidently control of the seed and is holding prices of oil with the idea that by and by those who require oil will have to come to them for it. The cause of the prices at the three markets and the usual statistics follow, together with summaries of the Chicago movement of seed for the month and for the calendar year closing to-day:—

FLAX PRICES AT CHICAGO.

Dec.	N. W. No. 1.	No. 1.	Rej.	Dec.	May.	July.	Sep.
24	1.00	.93	.89@.93	.93	.98½	.99	1.00
25	Holiday.						
26	Holiday.						
28	1.00	.93½	.89@.93	.93½	.98½	.99	1.00
29	1.01	.94	.90@.94	.94	.99	.99	1.00
30	1.01½	.94½	.90@.94	.94½	.99	.99	1.00

AT DULUTH.

	Cash.	Arrive.	Dec.	May.	July.
Dec. 24	.97	.97	.97	1.00¾	1.01¾
Dec. 28	.97½	.97½	.97½	1.01¾	1.02
Dec. 29	.97¾	.97¾	.97¾	1.01½	1.02¼
Dec. 30	.98¼	.98¼	.98¼	1.02	1.02¾

AT MINNEAPOLIS.

	Cash.	Arrive.	Dec.	May.
Dec. 24	.96¾	.96¾	.95¾	.98¼
Dec. 28	.97¼	.97¼	.96¼	.99¼
Dec. 29	.97½	.97½	.96½	.99½
Dec. 30	.98	.98	.97	1.00

Receipts at Chicago the past week were:—

NEW YORK SHELLAC CO
229 PEARL STREET
DIRECT IMPORTERS

"THE BEST BY EVERY TEST" PLANTEN'S CAPSULES AND "THE PIONEER AMERICAN CAPSULE HOUSE" PLANTEN'S "PERLOIDS" TRADE MARK
EMPTY AND FILLED. HARD AND SOFT. HAND AND MACHINE MADE.
ENCAPSULING PRIVATE FORMULAS A SPECIALTY. CORRESPONDENCE SOLICITED
H. PLANTEN & SON, (ESTABLISHED 1836) 224 WILLIAM STREET, NEW YORK.

	N. W. No. 1.	No. 1.	Rej.	No grde.	Non-Insp.	Ttl.
Dec. 24.....	1	..	..	..	..	1
Dec. 28.....	10	2	4	..	10	26
Dec. 29.....	..	2	..	..	4	6
Dec. 30.....	..	2	..	..	7	9
Dec. 24-30, 1903.....	11	6	4	..	21	42
Dec. 25-31,'02 ..		12	15	..	92	119

Shipments from Chicago the past week were:—

	Inspected. Cars.	Bu.	Non-insp. Cars.	Bu.	Totals. Cars.	Bu.
Dec. 24.....	..	.....	..	...	..	.....
Dec. 28.....	3	3,402	1	805	4	4,207
Dec. 29.....	4	3,718	..	...	4	3,718
Dec. 30.....	3	3,086	..	...	3	3,086
Dec. 24-30, 1903.....	10	10,206	1	805	11	11,101
Dec. 25-31, 1902.....	7	7,035	..	...	7	7,035

Receipts at the three primary markets for the week were:—

	Chicago.	Duluth.	Minneapolis.	Total.
Dec. 24.....	1	50	38	89
Dec. 28.....	26	108	104	238
Dec. 29.....	6	118	32	150
Dec. 30.....	9	41	32	82
	42	317	207	559

Stocks at the three markets on Dec. 26 are reported as follows:—

	Dec. 26.	Dec. 19.	Increase.	Dec. 27, 1902.
Chicago	73,445	73,445	.....	6,214
Duluth	5,023,818	4,882,161	141,657	2,793,295
Minneapolis.	1,564,892	1,524,820	40,072	1,374,776
	6,662,155	6,480,426	181,629	4,174,285

Following is the report of receipts and shipments of flaxseed at Chicago for December:—

BY RAIL, INSPECTED.

	Bushels.
N. W., No. 1	35,135
No. 1	28,560
Rejected	19,040
No grade	1,700
Total inspected by rail	84,435
Non-Inspected by rail	53,550
Total by rail	137,985
Number of cars	163
By lake, non-inspected	112,994
Grand total	250,979

SHIPMENTS BY RAIL.

No. 1, N. W.	None.
No. 1	57,235
Rejected	12,525
No grade	769
Total inspected	70,529
Non-inspected	7,745
Total shipment	78,274

Following is the annual statement of the Flaxseed Inspection Department of the Chicago Board of Trade for the calendar year, from Jan. 1 to Dec. 31, inclusive:—

RECEIPTS.

By Railroad (Inspected.)

	Bushels.
N. W., No. 1	105,527
No. 1	407,227
Rejected	358,750
No grade	38,321
Total by railroad	909,835

BY LAKE.

	Bushels.
Inspected	324,759
Non-inspected	1,033,860
Total	1,358,619
Total inspected	1,234,904
Total non-inspected	2,351,628
Grand total	3,586,632
Grand total, 1902	4,213,801

CARS.

Inspected	1,071
Non-inspected	1,472
Grand total	2,543

SHIPMENTS.

By Railroad (Inspected).

N. W., No. 1	15,343
No. 1	662,807
Rejected	67,700
No grade	769
Total by rail (inspected)	746,679
Non-inspected	40,414
Grand total	787,093
Grand total, 1902	1,232,018

CORN OIL.—Market is unchanged and is firm at previous quotation of $3.50 for car lots f. o. b. Chicago.

LINSEED OIL.—Market is firm at 33c., the price demanded by the principal producer and most of the larger outside mills. There is little activity at present, as is natural at this time of year.

OIL CAKE.—There is little business, and but slight inquiry. Prices are nominally $18@18.25 f. o. b. Chicago.

LARD.—Cash market closed yesterday at $6.82½, 12½c. above the close on Thursday of last week, and that much advance over the close on yesterday. The provision market opened excited and lower to-day, receipts of hogs being below estimates and prices 5c. to 10c. higher at the yards. First trades were 7½c. to 15c. over Wednesday's close, but selling to take profits on recent purchases caused a reaction. Later the market rallied on continued commission house buying for outside accounts, some covering of shorts, and partially in sympathy with the sharp advance in grain. Leaf lard is quotable to-day at 6⅞c., and extra neutral at 8⅛@8¾c.

STEARINES.—The market for prime oleo stearine has strengthened considerably the past week. Some sales have been made at 6½c., which about represents the market, although some makers are holding at 6¾c. No. 2 remains nominal in the absence of offerings. Lard stearine is quoted at 7¼@7½c., with but little inquiry. Mutton stearine, 6¼@6⅜c.; tallow stearine, 5½c.; grease stearine, 4⅝@5½c., according to quality.

OLEO OIL.—Market has ruled quiet throughout the week. Makers are holding at 46 florins for export, but both foreign and domestic is light. Extra oleo oil is offered here at 7½@7⅝c.; No. 2, 6¾@7¼c.; No. 3, 5¾@6c.; extra oleo stock, 6½@7¼c.

TALLOW.—The market has ruled strong, on the whole, with some grades a shade higher. Choice edible has experienced some large sales at 5¼c., and is quotable at 5¼@5½c.; prime packers' is higher, 5¼c., and No. 1 packers' at 5c.; No. 2 packers', 4⅛@4⅝c.; prime city, 5⅛@5¼c.; No. 1 renderers', 5c.; prime country, 5⅛@5¼c.; No. 1 country, 4¾@5c.; No. 2 country, 4⅛@4¼c.; B country, 4⅛@4½c.

GREASES—Maintain all of last week's firmness, and, in some instances, prices are a little higher. Offerings are light and inquiry good. A white is higher at 5@5¼c. (sales were reported yesterday at 5⅛c.); B, 4½@4⅝c.; yellow, 4c.; house, 4@4⅛c.; brown, 3⅝@3⅞c.; bone, 4¼@4⅝c., according to quality; glue stock, 4⅛c.; neatsfoot stock, 4@4¼c.

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F. W. MEAD & CO.
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BROKERS IN
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STILLWELL & GLADDING
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Chemists, Assayists, Technical Experts.
Analyses of Fertilizers, Oils, Paints, Varnishes Essential Oils, Soaps, Drugs, Tanning Materials, Foodstuffs, Water.
55 Fulton St., New York
Telephone, 528 John.

Chicago Fertilizer Market.

Chicago, Dec. 31, 1903.

There has been little change in the market the past week. In dried blood a few sales are reported at $2.45 for January delivery. Offerings are not large. Tankage is practically unchanged. Quite a number of sales are reported, but particulars are not given. Chicago quotations for ground tankage are on the basis of the following:—12 p. c., $2.25 and 10; 10 to 11 p. c., $2.20 and 10; 9 p. c., $2.15 and 10. Bone meal is unchanged; steamed is quoted at $18, and raw at $22@23 per ton. Hoof meal is unchanged at $2.30@2.32½ per unit.

Announcement is made in this issue of the Reporter that the Owl Drug Company, of San Francisco, one of the leading firms in the price-cutting war among the retailers of that city, has agreed to adopt a schedule not less than twenty per cent. under the regular retail price of an article. Since the item was written the Reporter has learned that V. Mott Pierce, chairman of the Committee of Proprietors working to adjust price schedules on their preparations, received a telegram from Vice-Chairman R. E. Queen, on Wednesday, Dec. 30, stating that the Owl Company's schedule had been accepted by the druggists and would probably be signed the following day. This will terminate a long and sharp price-cutting fight among the San Francisco druggists.

ISDAHL & CO.
Manufacturers of
Finest Lofoten
COD LIVER OIL
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Exporters of Opium, Otto of Rose, Gums Tragacanth, Mastic and Scammonium, Salep Root, Geranium Oil, etc.

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FLAX SEED
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DON'T FAIL TO SEND FOR SAMPLES AND PRICES.
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CARNAUBA WAX
CERESINE (White and Yellow)
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CHAS. PFIZER & CO.
NEW YORK
Manufacturing Chemists
CREAM TARTAR, Crystals and Powdered, 99½-100%
TARTARIC ACID, CITRIC ACID,
BORAX, Crystals, Powdered and Granulated,
BORACIC ACID, (Pure) Crystals, Granular and Powdered,
ROCHELLE SALTS, SEIDLITZ MIXTURE,
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ALSO A FULL LINE OF CHEMICALS FOR MEDICINAL AND TECHNICAL USES

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BATTELLE & RENWICK,
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MANUFACTURERS.
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250 and 175 Lb. Barrels.
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Crystals, Granulated and Powdered.

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COMPRESSED IN OUNCE BLOCKS.
LASTS TWO SEASONS.
921 REAL ESTATE TRUST BLDG. PHILADELPHIA, PA

INDUSTRIAL SECURITIES.

Reports from the principal trade centers agree in reporting the usual holiday dullness, but this is not believed to be exceptionally pronounced, while the general feeling is one of confidence that business will show prompt improvement after the turn of the year and that trade will equal that of last year. Indeed, many appear confident that business will improve rapidly and will show an increase over the early months of the year just closed. In the lines of trade represented by the Reporter an unusually good demand for holiday week is reported for chemicals, while the deliveries on contracts have been liberal, indicating that requirements for consumption are unusually large. In drugs and dyestuffs trade has been quiet, the purchases for the most part being of sufficient quantities to satisfy actual requirements until after New Year's, or until stock taking time. Paints have been very quiet, though some dealers report the entering of contracts for delivery later on. Oils have been irregular, about the only important movement being in mineral oils, though these have shown decided falling off. The industrial situation is regarded as very favorable and is, apparently, but little affected by the holiday season. For the most part, plants are running full time, except in instances where shut-downs or partial running of plants has been forced by labor troubles. In the metal and textile industries conditions are said to be steadily improving, but in these the outlook is regarded as somewhat uncertain. Manufacturers of machinery and tools report a good demand for their products, with contracts on hand which insure their full operation far into the new year. The manufacturers of agricultural implements, especially, report the outlook as most gratifying. The labor situation shows no important changes. Few of the strikes heretofore reported have been adjusted, but there have also been fewer new strikes and none of special importance as involving a large number of employes. It is believed that the number of skilled laborers idle in consequence of strikes is now smaller than for many months and the outlook is by many regarded as more favorable, but, on the other hand, the rumblings in labor's ranks continue and there is considerable discontent, while threats of strikes have not been wanting and it is said in labor circles that important strikes will be inaugurated after the new year has fairly opened. Some of these threats have been made before, especially by the garment makers in this city. The great agricultural staples, cotton alone excepted, have shown no important changes, the variations for the most part having been due to trading influences. Wheat opened on Monday at 87c. and showed only moderate variations until Thursday, when prices were stronger. The range for the week for May delivery was 86⅞@87⅞c., with the close on Thursday at 87¾c. Corn started the week at 50⅞c. and took a similar course, the range for the week for May delivery being 50¾@51⅝c., with the close on Thursday at the higher figure. Oats sold on Monday at 43c., later receded to 42c., but recovered partly on Thursday, closing at 42½c. Cotton sold on Monday at 13.88c., but broke steadily and on Thursday dropped below 13c., going to 12.77c. for January delivery and closed at 12.98c. Lard has varied considerably from day to day, but closed higher, the range for January delivery at Chicago being 6.62½@87½c., with the close on Thursday at 6.72½c. The market for time money has varied somewhat daily, but later steadied, while the supply has been fair and demand mainly for the shorter periods. Rates at the close were 6 per cent. for 30 to 60 days, 5¼@5½ per cent. for 90 days to four months and 4¾@5 per cent. for longer periods. Money on call on the Stock Exchange has ranged from 3 to 8 per cent., with the bulk of the business done at 5½@6½ per cent. The average rate was 5½ per cent. The closing rate on Thursday was 6½ per cent. Mercantile paper has been in fair supply the past week, with the demand rather light and rates fairly steady. Rates at the close were 5½@5¾ per cent. for 60 to 90 days' indorsements, 5¾@6 per cent. for choice single names having four to six months to run and 6@6¼ per cent. for other grades. The price of bar silver advanced early in the week and closed higher on Thursday at 56⅝@57⅜c. for commercial bars and 56¼@58½c. for Government assay bars, showing an advance of ⅝c. over the closing prices of last week. Mexican dollars closed at

In the following table are given the closing quotations Friday night. The market review is complete to Saturday's close.

Name.	Stock Outstanding.	Bonds Outstanding.	Dividends Payable.	Last Dividend.	Bid.	Asked.	Shares Sold This Week.	High and Low. 1902.		High and Low. 1903.	
Am. Agr'l Chemical Co.	$17,215,000	.....	Q.—J.	.....	13	13¾	.....	31⅝	18¾	25¾	12
pref. 6%*	18,153,000	.....	A.&O.	Oct. 1, '03, 3%	70½	70⅝	925	91	78¼	83½	69
Am. Alkali Co.	24,000,000	.....	.....	.....	..	..	.....	..	..	..	..
pref. 8%*	2,400,000	.....	.....	.....	..	..	.....	..	..	..	..
Am. Can Co.	41,233,360	.....	.....	.....	3¾	4	.....	..	..	..	..
pref. 7%*	41,233,300	.....	Q.—J.	Sept. 30, '03, 2¼%	33½	34½	.....	..	..	..	..
Am. Chicle Co.	6,000,000	.....	Q.—J.	Jan. 20, '04, 1%	95	102	.....	..	..	..	80
pref. 6%*	3,000,000	.....	Q.—J.	Jan. 20, '04, 1½%	75	82	.....	..	..	..	..
Am. Cotton Oil Co.	20,237,100	3,000,000	D.	Dec. 1, '03, 2% & June 1, '04, 2%	28½	30	1,000	57¾	30½	46¼	25¼
pref. 6%	10,198,600		J.&D.	Dec. 2, '03, 3%	83	90	70	90½	86	98¼	82
Am. Degras Co.	500,000	.....	.....	.....	..	..	.....	..	..	..	..
Am. Glue Co.	800,000	.....	.....	.....	..	..	.....	..	..	..	..
pref. 8%*	1,600,000	.....	F.&A.	Aug. 1, '03, 4%	.....		.....	..	..	..	..
Am. Linseed Co.	16,750,000	.....	.....	.....	9	10½	.....	28	12¾	19¾	5
pref. 7%	16,750,000	.....	Q.—M.	Sept. 15, '00, 1¾%	28	34¾	100	58	39½	48½	23½
Am. Smelt. & Ref. Co.	50,000,000	973,000	.....	Jan. 14, '04, 1¼%	49	49⅝	8,100	49⅝	36⅞	52⅝	36⅜
pref. 7%*	50,000,000		Q.—J.	Jan. 5, '04, 1¾%	90½	90⅜	1,600	100⅛	87½	99½	80¼
Am. Snuff Co.	11,001,700	.....	.....	Jan. 2, '04, 2½%	100	120½	.....	..	40½	126	90
pref.	12,000,000	.....	Q.—J.	Jan. 2, '04, 1½%	83	85	100	..	85	98⅜	80
Am. Soda Fountain Co.	1,250,000	.....	.....	.....	2	4	.....	..	..	..	..
pref. 6%*	1,250,000	.....	Q.—J.	Nov. 16, '03, 6%	60	70	.....	..	..	..	..
2d pref. 8%*	1,250,000	.....	.....	.....	14	17	.....	..	..	..	..
Am. Sugar Refining Co.	44,246,100	.....	Q.—J.	Jan. 1, '04, 1¾%	127⅞	128	47,415	135½	113	134⅜	107⅛
pref. 7%*	44,068,300	.....	Q.	Jan. 1, '04, 1¾%	123	124	300	122	115	123	115
Am. Tobacco Co. 6%	54,500,000	3,024,490	Q.—F.	Nov. 1, '03, 3%	.....		.....	..	..	..	..
pref. 8%	14,000,000		Q.—F.	Nov. 1, '03, 2%	130	140	.....	151½	140	149¼	130
Am. Window Glass	13,000,000	.....	.....	Jan. 20, '03, 1½%	50	..	.....	..	..	..	..
pref. 7%*	4,000,000	.....	M.&S.	Mar. 20, '03, 3½%	..	..	.....	..	..	..	..
Casein Co. of Am., 8%*	5,492,000	.....	Q.—F.	.....	..	9	.....	..	..	..	..
pref. 8%*	1,000,000	.....	Q.—F.	Nov. 11, '03, 2%	..	78	.....	..	..	..	..
Celluloid Co. 6%	5,925,000	.....	Q.—J.	Oct. 1, '03, 1½%	.....		.....	..	..	..	..
Chesebrough Mfg. Co.	500,000	.....	Monthly.	.....	420	450	.....	..	..	..	..
Compressed Gas Capsule Co.	13,500,000	.....	.....	.....	..	..	.....	..	..	..	..
pref. 8%	1,500,000	.....	.....	.....	..	..	.....	..	..	..	..
Continental Tobacco Co.	48,844,600	.....	.....	Oct. 1, '03, 4%	.....		.....	..	..	..	..
pref. 7%	48,846,100	.....	Q.—J.	Jan. 2, '04, 1¾%	103¼	104¼	1,022	126½	114	119	94¾
Con. Stock & Pet. Ex. Mem.	†($1,500)				.....	..	.....	..	..	..	..
Corn Products Co.	44,869,253	.....	Q.—M	Nov. 10, '03, 1%	17⅜	17½	950	38¼	26⅜	35	15½
pref. 7%*	27,362,750	.....	Q.—J.	Jan. 11, '04, 1¾%	67½	69	345	90	70⅝	85⅛	60
Diamond Match Co.	15,000,000	.....	Q.—M.	Dec. 12, '03, 2½%	128	130	10	..	130¼	140	132
Distilling Co. of America	44,546,973	5,000,000	.....	.....	4⅞	5¼	.....	..	..	..	..
pref. 7%	29,464,318		Q.—J	Apr. 15, '03, 1%	38	40	.....	..	..	..	..
Dixon Crucible Co.	734,500	.....	Q.—J	Jan. 15, '03, 1%	..	..	.....	..	..	..	..
Fisheries Co.	532,867	500,000	J.&J.	.....	..	..	.....	..	..	..	..
pref. 7%	2,000,000	.....	Annual	Jan. 10, '03, 7%	.....		.....	..	..	..	..
General Chemical Co.	7,405,500	.....	Q.—M.	Dec. 1, '03, 1¾%	53	57½	500	..	60¼	72	55
pref. 6%	10,000,000	.....	Q.—J.	Jan. 2, '04, 1½%	93	100	.....	..	98½	101⅝	95
Glucose Sugar Refining Co.	24,027,300	.....	Q.—M.	Dec. 2, '01, 1%	..	..	.....	..	..	..	..
pref. 7%*	13,638,300	.....	Q.—M.	Dec. 2, '01, 1¾%	..	..	.....	..	..	..	..
Harrison Bros. Co.	1,000,000	?	.....	.....	..	..	.....	..	..	..	..
pref.	1,500,000	1,500,000	Q.—F	Aug. 15, '01, 1¾%	..	..	.....	..	..	..	..
Maritime Ex. Mem.	†($55)				.....	..	.....	..	..	..	..
National Lead Co.	14,905,400	.....	.....	Mar. 1, '00, 1%	15	15½	950	32	15⅜	29½	10½
pref. 7%*	14,904,000	.....	Q.—M.	Dec. 15, '03, 1¾%	80	88	200	96	78¼	95	75
National Wall Paper Co.	30,000,000	.....	.....	.....	..	..	.....	..	..	..	..
pref. 8%	8,000,000	.....	.....	.....	..	..	.....	..	..	..	..
New Jersey Zinc Co.	10,000,000	10,000,000	.....	.....	..	..	.....	..	..	..	..
Penn Salt Mfg. Co.	3,000,000	.....	A.&O.	Oct. 15, '03, 6%	..	..	.....	..	..	..	..
Pittsburg Plate Glass Co.	9,850,000	.....	Q.—J.	.....	..	..	.....	..	..	..	..
pref.	150,000	.....	.....	.....	..	..	.....	..	..	..	..
P. Lorillard Co.	3,000,000	.....	.....	.....	..	..	.....	..	..	..	..
pref. 8%*	2,000,000	.....	Q.—J.	Oct. 1, '03, 2%	115	..	.....	..	..	..	..
Planters' Compress Co.	20,000,000	.....	.....	.....	..	..	.....	..	..	..	..
Proctor & Gamble Co.	5,250,000	1,000,000	Q.—F.	Aug. 15, '03, 3%	367	380	.....	..	..	..	..
pref. 8%*	2,250,000		Q.—J.	Oct. 15, '03, 2%	198	200	.....	..	..	..	..
Produce Exchange Membership.	†($200)				.....	..	.....	..	..	..	..
Pure Oil Co.	8,000,000	.....	.....	.....	..	..	.....	..	..	..	..
pref. 6%*	2,000,000	.....	.....	.....	..	..	.....	..	..	..	..
Quicksilver Mining Co.	5,708,700	.....	.....	.....	1	2	.....	4¾	2	2	1⅝
pref. 7%	4,291,300	.....	.....	May 8, '03, ½%	4	6	.....	11⅞	8	9	4
Royal Baking Powder Co.	10,000,000	.....	.....	.....	..	..	.....	..	..	..	117½
pref. 6%*	10,000,000	.....	Q.—J.	Dec. 30, '03, 1½%	99½	100½	.....	..	..	..	101
Southern Cotton Oil Co.	1,000,000	.....	J.&D.	June 15, '03, 4%	..	..	.....	..	..	..	..
Standard Oil Co.	97,500,000	.....	Q.—M.	Sept. 15, '03, 5%	663	668	.....	..	..	695	600
Standard Table Oil Cloth.	4,000,000	.....	.....	.....	..	..	.....	..	..	..	..
pref 7%*	4,000,000	.....	.....	.....	..	..	.....	..	..	..	..
Stillwell, Bierce & Smith Vaile Co.	1,012,100	300,000	.....	.....	..	..	.....	..	..	..	..
U. S. Glass.	3,200,000	.....	.....	.....	..	..	.....	..	..	..	..
U. S. Leather Co.	63,882,800				7⅝	7¾	6,225	15	10½	15¼	6
pref 8%*	42,292,300	5,280,000	Q.—J.	Jan. 2, '04, 1¼%	76⅛	76½	9,785	91¼	79⅛	96⅝	71⅛
U. S. Playing Card Co.	3,600,000	.....	Q.—J.	.....	90	98	.....	..	..	..	..
U. S. Printing Co.	3,500,000	.....	A.—M.	.....	65	69	.....	..	..	..	..
U. S. Reduction & Refining Co.	5,885,000		Q.—J.	July 1, '03, 1%	29	31	.....	44½	25	35¼	10⅛
pref. 6%	8,923,300	8,000,000	Q.—J.	Oct. 1, '03, 1½%	47	51	.....	68⅝	57	56	48
U. S. Rubber Co.	23,666,000	.....	.....	Apr. 30, '00, 1%	11⅛	12¼	1,335	19⅝	13⅜	19½	7
pref. 8%	23,525,500	12,000,000	Q.—J	Jan. 31, '01, 1%	40¼	41	2,015	63¼	49¼	58	30¼
Union Talc Co.	1,000,000	.....	.....	.....	..	..	.....	..	..	..	..
Virginia-Carolina Chemical Co.	27,984,400		Q.—M.	June 1, '03, 1½%	29½	29⅝	6,425	76	54	66⅝	17½
pref. 8%*	12,000,000	7,000,000	Q.—J.	Jan. 15, '04, 2%	98	101	286	134⅜	120	128½	80

*Cumulative. †Price of last seat sold.

INTEREST ON DEPOSITS.

The New Jersey Title Guarantee and Trust Company

CAPITAL. - - - $200,000.00

UNDIVIDED PROFITS. - - - 800,000.00

Receives Deposits Subject to Check and Allows Interest on Daily Balances, Issues Time and Demand Certificates of Deposits Bearing Interest.

IMPORTANT TO RENTERS OF SAFE DEPOSIT BOXES IN NEW YORK.

"THE LEGACY AND INHERITANCE TAX LAW," as enacted under the laws of the State of New York, section 9, chapter 399, of 1892, authorizes city or county officials to examine the contents of Safe Deposit Boxes at the death of renter, in order to determine the amount of tax to be levied on the estate.

Boxes to Rent from $5 to $300 per Annum.

The New Jersey Title Guarantee and Trust Company 83 & 85 MONTGOMERY STREET, JERSEY CITY, N. J.

43¼c. bid and 45½c. asked. Further engagements of gold were announced, making the total since Nov. 1 $22,940,000. The market for sterling exchange advanced irregularly until Thursday, when it closed strong. Rates for actual business at the close were 4.81⅛@4.81¼ for 60 days, 4.84⅛@4.84¼ for demand and 4.84⅝@4.84¾ for cables. The supply of grain and cotton bills has been moderate, while the demand was fair. Rates at the close were 4.80@4.80¾. The Industrials have shown only the ordinary variations due to trading influences, there being nothing to affect this class of securities, nor did the course of the general market appear to have any effect on these. Trading was fair for holiday week, though several were neglected. The general list of securities dealt in on the Stock Exchange advanced early in the week under rather heavy trading, but later became irregular, while trading fell off. On Thursday there was a rise in prices all along the line, as usual in the closing day of the year, but trading was rather light, the best part of the day being given over to skylarking by the younger members.

Sugar stock was quite actively traded in early in the week and showed some strength, based on the same considerations which influenced trading last week. There were no new developments and very little gossip. The last sale on Thursday was at 127⅞.

The fluctuations during the week have been from 124@128½, the lowest Saturday and the highest Tuesday, closing to-day at 124 bid.

Cotton Oil stock was traded in to a fair extent early in the week, but later it was neglected in the absence of any features to interest traders. There was, however, a weaker feeling, the offers being at 30, with bids down to 28½. The last sale reported, on Wednesday, was at 30.

The fluctuations during the week have been from 29½@30¼, the lowest Tuesday and the highest Monday, closing to-day at 28½ bid.

Lead stock developed some strength as the week advanced, but on what this was based was not clear, though the bidding appeared to be by various interests. There was no news and even the condition and prospects of trade were not discussed. The last sale on Thursday was at 15⅛.

The fluctuations during the week have been from 14½@15¼, the lowest Monday and the highest Wednesday, closing to-day at 14½ bid.

Linseed Oil stock was entirely neglected, not a sale being recorded on the Exchange, while the bids and offers varied considerably, the former ranging from 8 to 9¼ and the latter were at 10@10½.

Va.-Car. Chemical stock attracted considerable attention early in the week, but there were no features beyond repetition of previous reports as to the condition of the concern and the state of trade. Nor was the stock affected by the course of the general market, the variations being due to trading influences. The last sale on Thursday was at 29½.

The fluctuations during the week have been from 27@27⅝, the lowest Saturday and the highest Tuesday, closing to-day at 26 bid.

Corn Products stock was traded in each day, though bidding was at no time active. There were no developments and the variations were due to the course of traders. The range for the week was 17⅛@17⅞, with the last sale on Thursday at 17¼.

STANDARD OIL CO.

NAPHTHA DEPARTMENT.

Refiners of Naphtha and Gasoline.

Standard Oil Co.'s Red Crown Brand Deodorized Stove Gasoline.

THE QUALITY OF OUR STOVE GASOLINE IS UNEQUALLED. RELIABLE GOODS THAT ALWAYS GIVE SATISFACTION IS AN IMPORTANT FEATURE IN THE SUCCESS AND COMFORT OF USING A

GASOLINE STOVE.

Old or New Process.

Our Facilities are unsurpassed. Our aim, Prompt Attention to the wants of dealers and consumers everywhere and at all times. Don't fail to order RED CROWN BRAND.

Agencies in all the principal cities through the West and South.

Paraffine.

SEAL YOUR JELLY, jam and preserves by pouring a little melted Paraffine on top of each glass and jar. It will harden immediately, and form a covering that will keep the preserves sweet, clean and as soft and fresh at the top as at the bottom. Perfectly pure, tasteless, odorless, air-proof, water-proof, acid-proof, and a protection against vermin and mould. Paraffine is sold in pound packages for household uses at drug, grocery and general stores.

STANDARD OIL COMPANY, Special Depot, 408 W. 14th Street, NEW YORK.

MICA AXLE GREASE

Manufactured By the STANDARD OIL CO.

Cottonseed Oil Export Statistics.

The following table shows the amount of cottonseed oil, in gallons, exported to each country during the month of November, and during the period of eleven months ended Nov. 30, 1903, with comparisons:—

EXPORTS DURING NOVEMBER.

	1902.	1903.
United Kingdom	271,623	244,992
Belgium	83,475	15,000
France	678,661	341,349
Germany	634,221	281,785
Italy	255,480	178,480
Netherlands	1,626,715	1,010,427
Other Europe	355,009	426,924
British North America	114,815	52,771
Cent. Am. & Br. Honduras	2,046	2,793
Mexico	308,921	517,200
Cuba	18,054	6,271
Other W. I. & Bermuda	55,803	53,147
Argentina	2,000	9,740
Brazil	108,563	202,953
Chile	7,516	1,616
Other South American	19,082	37,183
British Australasia	4,618	156
Other Asia and Oceanica	.....	.....
British Africa	2,800	4,016
Other Africa	147,100	54,050
Totals, gallons	4,696,601	3,441,762

EXPORTS DURING ELEVEN MONTHS.

	1901.	1902.	1903.
United Kingdom	3,603,265	2,053,862	1,331,059
Belgium	1,130,484	352,696	124,481
France	9,283,467	4,985,381	3,654,576
Germany	3,342,708	3,058,065	2,214,587
Italy	2,589,688	958,075	1,376,453
Netherlands	10,543,001	9,737,607	5,531,498
Other Europe	4,883,595	2,955,662	3,826,247
Br. N. America	802,647	908,327	618,188
Cent. Am. & Br. Honduras	15,085	18,003	21,774
Mexico	3,087,766	2,346,813	3,026,614
Cuba	85,587	84,244	113,242
Other West Indies & Bermuda	791,403	749,135	809,461
Argentina	90,962	46,250	40,415
Brazil	878,862	880,453	517,510
Chile	33,930	34,447	15,060
Other S. America	350,695	331,935	356,158
Br. Australasia	178,239	30,935	77,534
Other Asia and Oceanica	27,206	50	567
British Africa	46,027	36,007	42,657
Other Africa	552,657	267,634	179,236
Totals, gals.	42,377,454	29,836,451	23,877,917

EXPORTS BY MONTHS.

	1900.	1901.	1902.	1903.
Jan.	7,100,740	6,089,587	3,533,840	4,252,774
Feb.	4,185,638	6,289,902	2,201,340	2,908,178
March	4,133,688	5,251,955	2,272,824	3,025,721
April	3,056,532	4,944,805	2,255,276	2,033,950
May	3,012,760	3,991,528	2,775,577	2,100,348
June	2,041,088	2,339,703	1,761,837	1,282,174
July	1,289,595	1,852,602	1,876,842	845,567
Aug.	3,154,303	1,843,434	1,626,209	1,187,819
Sept.	2,202,682	1,535,701	2,726,093	1,267,153
Oct.	2,805,504	3,837,162	4,091,322	1,572,948
Nov.	4,788,607	4,371,917	4,696,601	3,441,762
Dec.	6,168,279	4,795,760	5,063,169	.....
Totals	44,538,756	47,065,231	34,870,017	.....
Average	3,711,563	3,917,103	2,905,835	2,170,719

Turpentine Makers of the Tropics.

The long-leaf turpentine manufacturer of the tropical sections of the world is rather a different person from the Virginian and Texan turpentine maker of the United States. His methods of getting turpentine, rendering it adaptable for use in practice, and the mode of utilization of the products all differ. The native turpentine gatherers of the tropical countries now possessed by the United States, use the "box system" of collection as a rule. The native turpentine gatherer lives in the locality of the turpentine forests and taps such trees as he sees fit. He is a very independent person and cares little whether he is successful or not. He usually taps just as many trees as will furnish him with just enough product to keep him engaged long enough to make sufficient money to keep him alive and no more. He works for the day's needs only. He employs crudest forms of tools. Figure 1 is a sketching of a box-cutting instrument utilized for chopping the needed crevices in the trees. The blade part is marked (a). This is metal and the edge is keen. There are several points, fixings and devices connected for pricking the barks, and getting at various portions of the wood fiber of the tree, and interior of the cavities. Figure 2 is a view of one of the boxes cut in the side

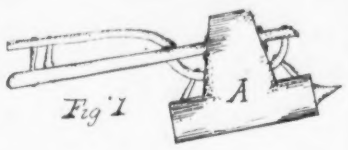

Fig 1

Fig 2

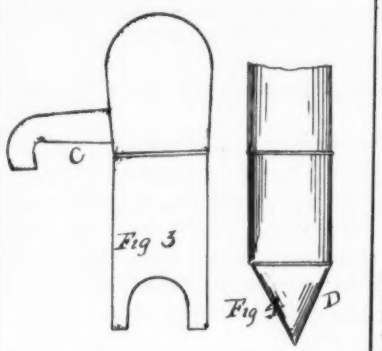

Fig 3 Fig 4

of a tree. The native cuts the cavity in straight at the bottom, as at (b), thus making inclined sides and top. The drip of resinous matter from the tapped veins enters a receptacle placed upon the shelf thus formed and the valuable turpentine product is caught. "Chipping" is the next process and is effected by using the tool shown in figure 3. The lower end of this tool has a "U" shaped edge, which is used to cut into the barks of the tree above the box. The workman presses his shoulder against the top of the tool and exerts pressure upon the handle (c). Little avenues are thereby formed, leading from different directions on the bark of the tree to the common center, just above the cavity in the tree, and the resinous substances can be seen oozing along to the receptacle, where they are caught. Fires are the source of considerable trouble to the natives. They do not mind the destruction of a lot of forest lands, but they often have their nipa shacks near the turpentine forests and they fear losing these. Therefore the natives usually dig up the ground for several feet in a circle about the trees. This earth is devoid of inflammable material and fires are avoided from the ground sources. The tool used for working the ground for this purpose consists of a rake-like affair and a pointed tool as shown in figure 4. This is a wood affair, consisting of a straight piece of stock, about six feet long, three inches in diameter, and furnished with a point (d). The natives stir the earth with the point.

Fig 5

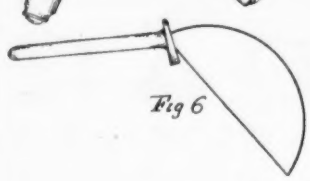
Fig 6

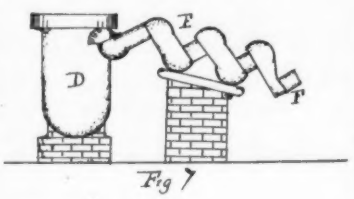

Fig 7

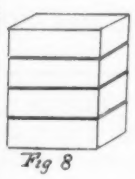
Fig 8

Fig 9

One of the scraping tools used by the native turpentine collectors is exhibited in figure 5. It is made of a portion of curved metal, flat in pattern, with the scraping edge quite sharp. There are handles at either end, made of wood and secured to the curved blade as shown. The native can scrape with considerable speed by using this instrument. Another odd design of tool used by the native turpentine people is shown in figure 6. This tool consists of a flat steel blade, curved at top, with cutting edge straight. The cutting edge is so made that its keenness works to good advantage on barks, or other stock. The handle is hard wood. Copper stills are used in some of the turpentine works, but as a rule very crude native contrivances have to be employed. The nearest approach to a still seen by the writer is sketched in figure 7. The dip or scrape, when it arrives at the place where the material is to be distilled, is run into a copper kettle (d). Sometimes this is other metal, copper lined. I saw some made of masonry with lining of sheet metal. Just below this vessel (d) is a fireplace. Wood fuel is used and quite an uneven but hot fire results. Arrangements are made for a stream of water from a bamboo pipe to flow into the still. The volatile spirits of turpentine are carried over, mixed with the steam thus generated, into the copper coil of pipe (e). The substance condenses of course before the end of the pipe (f) is reached, and becomes the product of commerce sought for by the native workmen. The non-volatile resin remaining in the still is drawn off by taps. Chips, barks, foreign stuffs in general, are strained out of this stock and the clear resin is passed off to vats. Then it is passed to barrels in course of time, where the resin is allowed to stand and harden in readiness for the markets. The product from the tropics is rather darker in shade than the average product of the American forests. Figures 8 and 9 show rosin packed for market.

Exports of Paraffine Wax

In the following table are given the amounts of paraffine wax exported to each country during the month of November and during the period of eleven months ended Nov. 30, 1903, with comparisons, the quantities being in pounds:—

EXPORTS DURING NOVEMBER.

Exported to—	1902.	1903.
United Kingdom	12,298,341	9,915,118
Belgium	502,026	481,451
France	25,370	40,532
Germany	841,853	2,425,276
Italy	1,420,366	819,048
Netherlands	631,200	643,566
Other Europe	95,073	642,955
British North America	14,630	114,142
Cent. Am. & Br. Honduras	24,335	27,496
Mexico	486,305	736,052
W. Indies & Bermuda	3,662	.....
Brazil	27,149	17,156
Chile	.....	54,072
Other South America	12,400	16,000
Japan	316,418	253,311
British Australasia	.....	202,440
Other Asia & Oceanica	237,337	209,068
British Africa	31,515	57,474
Totals, pounds	16,867,980	16,655,152

EXPORTS FOR ELEVEN MONTHS.

	1901.	1902.	1903.
U. Kingdom	79,802,349	91,209,641	101,359,875
Belgium	3,387,838	4,183,151	6,124,067
France	641,572	763,079	656,381
Germany	16,887,444	17,224,001	21,547,701
Italy	7,985,503	10,113,633	14,055,207
Netherlands	4,501,283	4,831,153	7,103,117
Other Europe	4,837,180	7,349,515	8,182,894
Br. N. Am.	55,313	194,858	535,076
Cent. Am. & Br. Honduras	305,601	384,869	262,720
Mexico	5,032,261	5,507,169	6,205,365
West Indies & Bermuda	16,054	37,106	23,875
Brazil	108,960	226,862	240,101
Chile	119,280	6,238	161,066
Other S. Am.	96,252	58,114	114,073
Japan	4,232,743	4,733,842	11,636,036
Br. Australasia	2,608,817	4,857,950	5,626,778
Other Asia and Oceanica	1,442,525	1,613,535	1,907,607
British Africa	1,578,504	1,859,652	664,720
Totals, lbs.	133,729,487	155,234,414	188,006,669

EXPORTS BY MONTHS.

	1901.	1902.	1903.
January	7,252,804	20,067,601	19,282,980
February	11,332,703	12,980,393	18,795,476
March	9,115,421	12,168,232	16,571,058
April	8,911,101	12,322,718	20,026,779
May	6,689,307	10,763,958	16,235,269
June	6,689,307	10,081,887	13,269,833
July	7,529,207	14,422,629	17,866,239
August	8,853,791	11,481,293	13,313,163
September	11,933,258	14,531,190	17,760,008
October	26,149,025	19,606,533	18,030,612
November	22,828,393	16,867,980	16,655,152
December	19,964,740	20,034,090	.....
Totals, lbs.	151,694,227	175,268,504	.....
Average	12,641,185	14,605,709	17,091,515

STANDARD OIL COMPANY, GENERAL OFFICES: CINCINNATI, OHIO.

Dealers in ENGINE and PERFECTION Water White OILS. FINE ENGINE and CYLINDER OILS.

CANDLES, AXLE GREASE, TURPENTINE, LINSEED OILS.

PRATT'S PATENT PREPARED GASOLENE

Adapted to all kinds of Gas Machines 86°, 88° and 90° Gravities

PRATT'S DEODORIZED STOVE GASOLENE

For use in Vapor Stoves. Made in accordance with the recommendation of the Vapor Stove Manufacturers and guaranteed not to smoke, smell or gum the burner.

REDISTILLED NAPHTHAS

Also Fuel Oil, Lima Crude, Distillates, &c., prepared especially for Gas Companies, and obtainable either in barrel or tank car.

BOULEVARD GAS FLUID

For use in Vapor Street Lamps, Plumbers' Torches &c.

DOUBLE-DISTILLED DEODORIZED BENZINE AND NAPHTHA

of all grades and gravities from 62° to 76° for manufacturing varnishes and mixed paints, rubber and gossamer goods, floor and table oil cloths, as well as for general use of druggists, dyers, cleaners, etc., etc. The above goods can be had in quantities to suit the purchaser.

everwhere in the East, either through our agents or from us direct.

STANDARD OIL CO., PRATT WORKS,

Proprietors "PRATT'S ASTRAL OIL." . . . . . 26 BROADWAY, NEW YORK.

IMPORTS ENTERED AT NEW YORK FOR CONSUMPTION.

For week ending Dec. 31.

ACID, BENZOIC—4 cs, 624 lbs, Merck & Co, Belgravia, Hamburg
23 cks, 5,072 lbs, Kuttroff, Pickhardt & Co, Zeeland, Antwerp
100 cks, H A Metz & Co, Rotterdam, Rdm
CARBOLIC—80 dms, Hensel, B & L, Amsterdam, Rotterdam
60 dms, 4 tons, Schoellkopf, H & H Co, Minneapolis, London
OXALIC—30 cks, 27,849 lbs, Kuttroff, Pickhardt & Co, Zeeland, Antwerp
PHOSPHORIC—2 cs, 440 lbs, Merck & Co, Belgravia, Hamburg
PYROGALLIC—4 pkgs, Schering & Glatz, Belgravia, Hamburg
SALICYLIC—26 cs, 2,000 lbs, Schering & Glatz, Blucher, Hamburg
20 bbls, 2,000 lbs, V Koechl & Co, Zeeland, Antwerp
ALBUMEN, EGG—10 cs, 261 lbs, Zinkeisen & Co, La Bretagne, Havre
ALCOHOL—21 bbls, 946 gals, F O Boyd, Belgravia, Hamburg
5 bbls, 245 gals, Davis Lawrence, Belgravia, Hamburg
ALIZARINE—45 cks, 18,603 lbs, Kuttroff, Pickhardt & Co, Amsterdam, Rotterdam
85 cks, 30,324 lbs, Kuttroff, Pickhardt & Co, Zeeland, Antwerp
16 cks, H A Metz & Co, Rotterdam, Rdam
ASS'T—30 cks, 1,553 gals, Kuttroff, Pickhardt & Co, Georgic, Liverpool
ALUMINA, SULPHATE—30 cks, 21,763 lbs, Roessler & H Chem Co, Rotterdam, Rdm
AMMONIA, NITRATE—10 cks, 4,787 lbs, Schoellkopf, H & H Co, Minneapolis, Ldn
SAL—37 cks, 10,078 lbs, A Klipstein & Co, Belgravia, Hamburg
SULPH—755 bgs, 167,677 lbs, Parsons & Petit, Georgic, Liverpool
ANETHOL—2 cs, G Lueders & Co, Blucher, Hamburg
ANILINE COLORS—11 cs, 1,100 lbs, Kuttroff, Pickhardt & Co, Amsterdam, Rotterdam
124 cks, 20,250 lbs, Kuttroff, Pickhardt & Co, Amsterdam, Rotterdam
2 cks, Oakes Mfg Co, Amsterdam, Rdm
701 cks, 2 cs, Cassella Color Co, Amsterdam, Rotterdam
16 cks, 5,060 lbs, Heller Merz Co, Amsterdam, Rotterdam
103 cks, 120 kegs, 12 cs, Berlin Aniline Works, Belgravia, Hamburg
1 cs, Sykes & Street, Amsterdam, Rtdm
20 dms, Sykes & Street, Amsterdam, Rtdm
13 cks, R Holliday & Sons, Georgic, Liverpool
37 cs, Cassella Color Co, Rotterdam, Rtdm
661 cks, Cassella Color Co, Rotterdam, Rdm
2 cks, 606 lbs, Innis & Co, Rotterdam, Rdm
5 cks, Kuttroff, Pickhardt & Co, Rotterdam, Rdm
86 cks, Hensel, B & L, Rotterdam, Rtdm
1 ck, F Bredt & Co, Zeeland, Antwerp
5 bbls, Geigy Aniline & Extract Co, Zeeland Antwerp
1 keg, Geisenheimer & Co, Zeeland, Atwp
6 bbls, Geigy Aniline & Ext Co, Zeeland, Antwerp
30 cks, 6,600 lbs, A Klipstein & Co, Zeeland, Antwerp
21 cks, 2 cs, 2,300 lbs, Geisenheimer & Co, Main, Bremen
16 bbls, Schoellkopf, H & H Co, Zeeland, Antwerp
13 bbls, Schoellkopf, H & H Co, Zeeland, Antwerp
28 cks, F Richard, Zeeland, Antwerp
8 pkgs, New York & Boston Dyewood Co, Zeeland, Antwerp
6 bbls, A de Ronde & Co, Zeeland, Atwp
4 cks, Oakes Mfg Co, Zeeland, Antwerp
11 cks, C Bischoff & Co, Zeeland, Antwerp
6 bbls, J Campbell & Co, Zeeland, Antwerp
82 cks, 9 cs, Kuttroff, Pickhardt & Co, Zeeland, Antwerp
81 cks, Kuttroff, Pickhardt & Co, Zeeland, Antwerp
19 cks, R Holliday Sons, Georgic, Liverpool
104 pkgs, H A Metz & Co, Rotterdam, Rdm
30 cks, H A Metz & Co, Rotterdam, Rdm
OIL—22 dms, Selling Co, Minneapolis, London
ANTIMONY, OXIDE—40 bbls, 10,945 lbs, Geo Reibe & Co, Capt W Menzell, Barcelona
13 cks, O Haase, Belgravia, Hamburg
ARCHIL—15 cks, 8,795 lbs, J J Keller & Co, Belgravia, Hamburg
15 cks, R Holliday & Sons, Georgic, Lpool
2 cks, Schoellkopf, H & H Co, Minneapolis, London
7 cks, R Holliday & Sons, Georgic, Lpool
ARGOLS—38 cks, 800 bgs, 231,611 lbs, Tartar Chemical Co, Ixia, Messina
184 bgs, 46,552 lbs, Tartar Chemical Co, Citta di Milano, Naples
BALSAM—25 cs, Stallman & Fulton Co, Belgravia, Hamburg
BAY LEAVES—67 bls, 19,863 lbs, L W & P Armstrong, Talisman, Pt Petro
BARIUM—83 cks, 90,560 lbs, Gabriel & Schall, Amsterdam, Rotterdam
84 cks, 92,281 lbs, Gabriel & Schall, Rotterdam, Rotterdam
BINOXIDE—34 cks, 33,577 lbs, Oakland Chemical Co, Amsterdam, Rotterdam
14 cks, A Penchat, Rotterdam, Rotterdam
CHLO—75 cks, Roessler & H Chem Co, Amsterdam, Rotterdam
BARYTES—104 cks, 86,486 lbs, Gabriel & Schall, Main, Bremen
BARYTES NITRATE—20 kegs, Chemical Imp & Mfg Co, Amsterdam, Rotterdam
BENZOL NITRO—10 dms, McKesson & Robbins, Belgravia, Hamburg
BERLIN BLUE—15 cks, 3,308 lbs, H Kohnstamm & Co, Amsterdam, Rotterdam
BITUMEN—20 cks, 10,307 lbs, Gabriel & Schall, Main, Bremen
BLANC FIXE—62 cks, 63,681 lbs, Kuttroff, Pickhardt & Co, Belgravia, Hamburg
10 cks, 4,017 lbs, Gabriel & Schall, Rotterdam, Rotterdam
50 cks, 39,019 lbs, General Chemical Co, Rotterdam, Rotterdam
BLEACHING POWDER—30 cs, 9,840 lbs, Troy Laundry & Mach Co, Armenian, Lpool
970 dms, 441,480 lbs, Roessler & H Chem Co, Albano, Hamburg
38 cks, 33,688 lbs, A Klipstein & Co, Zeeland, Antwerp
BONE BLACK—23 cks, Binney & Smith, Amsterdam, Rotterdam
BRIMSTONE—862 tons, Parsons & Petit, Ixia, Licata
BRISTLES—22 cs, 4,331 lbs, F W Von Stade, La Bretagne, Havre
59 pkgs, 9,189 lbs, Wells, Fargo & Co, St Paul, London
7 cks, 1,474 lbs, E & H Levy, La Bretagne, Havre
5 cks, 1,053 lbs, E & H Levy, La Bretagne, Havre
BRONZE POWDER—20 cs, 6,295 lbs, Gerstendorfer Bros, Main, Bremen
13 cs, 2,388 lbs, Baer Bros, Main, Bremen
5 cs, 1,200 lbs, S Rosenhaupt, Main, Bremen
4 cs, 2,000 lbs J Marsching & Co, Main, Bremen
CARDAMOMS—5 cs, 281 lbs, Stallman & Fulton Co, St Paul, London
4 cs, 394 lbs, A A Stilwell, Minneapolis, London
CASSIA—550 cs, F H Leggett, Satsuma, Hong Kong
100 cs, F H Leggett, Shimosa, Hong Kong
50 cs, J W Phyfe & Co, Shimosa, Hong Kong
250 cs, D A Shaw & Co, Satsuma, Singapore
CELERY SEED—50 bls, 10,000 lbs, Parke, Davis & Co, Georgic, Liverpool
CHEMICALS—60 pkgs, Merck & Co, Amsterdam, Rotterdam
22 bbls, 29 cs, Merck & Co, Belgravia, Hamburg
32 cbys, Merck & Co, Belgravia, Hamburg
13 cks, J Marsching & Co, Main, Bremen
COMP—12 cks, Berlin Aniline Works, Belgravia, Hamburg
38 cs, E Levi, Amsterdam, Rotterdam
1 cs, Dodge & Olcott, La Bretagne, Havre
20 cs, Merck & Co, Belgravia, Hamburg
50 demj, Merck & Co, Main, Bremen
PREP—20 cks, S Jordan & Co, Amsterdam, Rotterdam
5 cs, Schering & Glatz, Belgravia, H'b'g
11 cs, Schering & Glatz, Blucher, H'b'g
6 cs, Eimer & Amend, Minneapolis, London
30 bbls, Roessler & H Chem Co, Rotterdam, Rotterdam
3 cks, Roessler & H Chem Co, Rotterdam, Rotterdam
SALT—5 cks, 2,406 lbs, Kuttroff, Pickhardt & Co, Amsterdam, Rotterdam
5 cks, 2,527 lbs, Kuttroff, Pickhardt & Co, Zeeland, Antwerp
17 cks, Kuttroff, Pickhardt & Co, Zeeland, Antwerp
64 cks, 22,000 lbs, Kuttroff, Pickhardt & Co, Belgravia, Hamburg
3 cs, Lehn & Fink, Minnehaha, London
CHINA CLAY—350 cks, 175 tons, J D McGlincey, Georgic, Liverpool
CHLORALHYDRATE—8 cs, Lehn & Fink, Blucher, Hamburg
CHROME OXIDE—3 cks, 1,090 lbs, Roessler & H Chem Co, Rotterdam, Rotterdam
CINNAMON—5 bls, R Brauss & Co, Shimosa, Singapore
CLOVES—200 bls, C S Cox & Co, Minneapolis, London
COAL TAR PREP—2 cks, 1,000 lbs, Kuttroff, Pickhardt & Co, Amsterdam, R'dam
5 cs, E Fougera & Co, La Bretagne, Havre
1 ck, 10 kegs, 5 cs, Berlin Aniline Wks, Belgravia, Hamburg
22 cs, G Gennert, Belgravia, Hamburg
37 cks, Cassella Color Co, Rotterdam, Rotterdam
3 cks, 1,500 lbs, Kuttroff, Pickhardt & Co, Zeeland, Antwerp
12 cs, G Gennert, Blucher, Bremen
15 cks, H A Metz & Co, Rotterdam, Rotterdam
COBALT OXIDE—2 cs, 1,000 lbs, J Marsching & Co, La Touraine, Havre
9 cs, 9,800 lbs, J Marsching & Co, Lucania, Liverpool
COCA LEAVES—39 bls, 3,796 lbs, Schieffelin & Co, Seguranca, Colon
COCOA BUTTER—50 cs, 11,200 lbs, T M Duche & Sons, Minneapolis, London
50 cs, 10,023 lbs, Vollman, Stallwerck & Co, Rotterdam, Rotterdam
COCHINEAL—20 bgs, 4,280 lbs, H Kohnstamm & Co, St Paul, London
COLORS—1 ck, Perry, Ryer & Co, Lucania, Liverpool
4 cs, Favor, Ruhl & Co, La Bretagne, Havre
33 cks, A W Smith & Co, Amsterdam, Rotterdam
2 cs, A W Smith & Co, Amsterdam, Rotterdam
1 cs, C Helmuth, Amsterdam, R'dam
1 cs, Rooney & Spencer, Minneapolis, London
2 cs, A Sartorius, St Paul, London
11 cs, G A & E Meyer, La Bretagne, Havre
8 cks, F Fezandie, Belgravia, Hamburg
8 cs, Fritzsche Bros, Belgravia, H'b'g
2 cs, R Holliday & Sons, Georgic, L'pool
33 cks, J W Coulston & Co, Main, Bremen
13 cks, Kuttroff, Pickhardt & Co, Belgravia, Hamburg
25 cks, A W Smith & Co, Rotterdam, Rotterdam
3 cks, P Uhlich & Co, Rotterdam, R'dam
CORKWOOD—552 bls, Gudewell & Bucknell, Capt W Menzell, Barcelona
DRUGS—1 cs, Dodge & Olcott, La Bretagne, Havre
21 bls, R Hilliers Son Co, Blucher Hbg
16 cs, Lehn & Fink, Blucher, Hamburg
8 cs, Lehn & Fink, Minnehaha, London
DUTCH METAL CLIPS—26 cs, Baer Bros, Main, Bremen
DYEWOOD EXT—15 cks, 6,047 lbs, A Klipstein & Co, Amsterdam, Rotterdam
5 cks, 1,508 lbs, Sykes & Street, La Bretagne, Havre
5 bbls, 2,090 lbs, Geigy Aniline & Extract Co, Zeeland, Antwerp
50 bbls, 25,377 lbs, Kuttroff, Pickhardt & Co, Belgravia, Hamburg
ELATERIUM—1 cs, 400 ozs, Parke, Davis & Co, Belgravia, Hamburg
FENNEL SEED—20 bgs, 4,400 lbs, McKesson & Robbins, Belgravia, Hamburg
FULLERS EARTH—774 bgs, 77½ tons, L A Saloman & Bro, Minnehaha, London
GAMBIER—504 lbs, Hoople & Androvette, Minneapolis, London
GELATINE—47 cs, 2,399 bls, P Puttmann, Rotterdam, Rdam
GENTIAN—8 bls, 1,580 lbs, N Baker, Rotterdam, Rdam
GLASS, CYLENDER—3 cs, Zahn & Bowley, Amsterdam, Rotterdam
15 cs, Bendit Drey & Co, Amsterdam, Rotterdam
41 cs, Bendit, Drey & Co, Amsterdam, Rotterdam
36 cs, A Reigelmann, Rotterdam, Rdam
5 cs, T W Morris, Rotterdam, Rdam
PLATE—10 cs, Van Horne, Griffen & Co, Rotterdam, Rdam
6 cs, Zahn & Bowley, Rotterdam, Rdam
11 cs, Zahn & Bowley, Zeeland, Antwerp
3 cs, Bendit, Drey & Co, Zeeland, Ant
WINDOW—25 cs, Van Horne, Griffin & Co, Rotterdam, Rdam
160 cs, R S Morison, Zeeland, Antwerp
GLOY—12 cks, B P Ducas Co, Minneapolis London
4 cks, O G Hempstead, Belgravia, Hbg
GLUCOSE—6 cks, 5,489 lbs, Rose & Co, Blucher, Hamburg
GLYCERINE—25 dms, 26,281 lbs, J Munroe & Co, Amsterdam, Rdam
40 dms, 44,563 lbs, Marx & Rawolle, Capt W Menzell, Barcelona
GLUE—20 cs, 14,361 lbs, S Isaacs & Co, Rotterdam, Rotterdam
100 bgs, 22,046 lbs, S Isaacs & Co, Rotterdam, Rotterdam
GUM, CHICLE—73 bls, 6,785 lbs, Eggers & Heinlein, Coastwise, New Orleans
COPAL—480 pkgs, 86,128 lbs, L C Gillespie & Son, Amsterdam, Rotterdam
168 cs, Paterson, Beardman & Co, Shimosa, Singapore
60 pkgs, A Mason, St Paul, London
150 cs, 15 tons, J Meyer & Son, Shimosa, Singapore
120 cs, R Brauss & Co, Shimosa, Singapore
DAMAR—18 cs, 6,802 lbs, G W S Paterson, Amsterdam, Rotterdam
20 cs, 4,613 lbs, E Hills Son & Co, Shimosa, Singapore
GAMBOGE—2 cs, Lehn & Fink, Minnehaha, London
KAURI—220 cs, E Calman & Co, Minnehaha, London
MYRRH—2 cs, Lehn & Fink, Minnehaha, London
TRAG—10 cs, Parke, Davis & Co, St Paul, London
HELLEBORRE ROOT—4 bls, Lehn & Fink, Blucher, Hamburg
INDIGO, CARMINE—6 cks, 600 lbs, Kuttroff, Pickhardt & Co, Amsterdam, Rotterdam
4 cks, 400 lbs, Kuttroff, Pickhardt & Co, Zeeland, Antwerp
JUNIPER BERRIES—200 bgs, 26,400 lbs, Parke, Davis & Co, Vincenzo Fiorio, Genoa
LAMP BLACK—4 cks, 880 lbs, R Mayer & Co, Zeeland, Antwerp
LANOLINE—55 cs, Victor Koechl, Albano, Hamburg
60 cs, Victor Koechl, Blucher, Hburg
LEMON PEEL—1 bl, Luyties Bros, Belgravia, Hamburg
LICORICE, ROOT—20 cs, 4,151 lbs, A H. Ringk & Co, Capt W Menzell, Seville
85 bls, 11,880 lbs, Parke, Davis & Co, Capt W Menzell, Seville
5,094 pkgs, 643,302 lbs, Weaver & Sterry, Capt W Menzell, Seville
25 cs, 7,774 lbs, Stallman & Fulton Co, Georgic, Liverpool
LIME JUICE—1 ck, Lehn & Fink, Minnehaha, London
LYCOPODIUM—5 cs, 500 lbs, McKesson & Robbins, Belgravia, Hamburg
MARINE PAINT—90 bbls, Rahtgens Am Comp Co. Minneapolis, London
MACE—25 cs, J Kissock & Co, Amsterdam, Rotterdam
MANGANESE, BORATE—2 cks, C Helmuth, Amsterdam, Rotterdam
OXIDE—3 cks, Otto Haase, Belgravia, Hbg
MANURE SALT—1,000 bgs, 224,000 lbs, P Weidinger & Son, Belgravia, Hamburg
750 bgs, 168,630 lbs, P Weidinger & Son, Albano, Hamburg
500 bgs, 111,760 lbs, Peters, White & Co, Belgravia, Hamburg
MEDICINAL, BARK—1 pkge, Schieffelin & Co, Ixia, Messina
BEANS—3 bgs, 360 lbs, A U Andrus & Co, St Paul, London
HERBS—8 bls, 1,100 lbs, Peck & Velsor, Belgravia, Hamburg
46 bls, Parke, Davis & Co, Belgravia, Hbg
13 bls, 2,048 lbs, A U Andrus & Co, Blucher, Hamburg
FLOWERS—9 bls, 2,004 lbs, Stallman & Fulton Co, Georgic, Liverpool
LEAVES—7 bls, Parke, Davis & Co, Belgravia, Hamburg
10 bls, Stallman & Fulton Co, Zeeland, Ant
54 bls, Parke, Davis & Co, Georgic, Lpool
PREP—65 cs, 8,580 lbs, E Levi, Main, Bremen
ROOT—27 bls, 4,602 lbs, Stallman & Fulton Co, St Paul, London
13 bls, J L Hopkins & Co, Belgravia, Hbg
110 bls, 24,769 lbs, Stallman & Fulton Co, Georgic, Liverpool
6 bls, A W Smith & Co, Rotterdam, Rdam
31 bls, Parke, Davis & Co, Georgic, Lpool
110 bls, Peek & Velsor, Georgic, Liverpool
SEED—5 bgs, Luyties Bros, Belgravia, Hbg
2 bgs, J L Hopkins & Co, Belgravia, Hbg
55 bgs, 10,780 lbs, Stallman & Fulton Co, Georgic, Liverpool
24 bgs, Peek & Velsor, Rotterdam, Rdam
MENTHOL—3 cs, Lehn & Fink, Minnehaha, London
MUSTARD SEED—800 bgs, 176,000 lbs, J Kissock & Co, Minneapolis, London
100 bgs, W G Dean & Son, St Paul, Ldn
NAPTHALINE—1 ck, 605 lbs, Heller & Merz Co, Amsterdam, Rotterdam
NUTMEGS—233 cs, Rump & Cattus, Amsterdam, Rotterdam
10 cs, J W Phyfe & Co, Shimosa, Singapore
OIL, ALMOND—25 cs, 300 lbs, G Lueders & Co, Citta di Milano, Genoa
BERGAMOT—25 cs, 625 lbs, G Lueders & Co, Ixia, Messina
CAMPHOR—75 cs, 6,720 lbs, Magnus & Lauer, Satsuma, Kobe
CASSIA—20 cs, 1,333 cks, Stallman & Fulton Co, Satsuma, Hong Kong
COCOANUT—8 pps, 13 puns, 39 hhds, Winter & Smillie, Indrades, Cochin
COD—100 cks, 5,024 gals, Swan & Finch Co, Coastwise, Boston
50 cks, 2,484 gals, Swan & Finch Co, Rosalind, St. John
160 cks, 8,338 gals, Swan & Finch Co, Rosalind, St John
CODLIVER—5 cks, 150 gals, Jas Lee & Co, Corinthian, Glasgow
10 bbls, 300 gals, S G McCotter, Rosalind, St John
10 bbls, 300 gals, Stallman & Fulton Co, Rosalind, St John
50 bbls, 1,500 gals, David E Green & Co, Consuelo, Hull
CORIANDER—1 cs, 50 lbs, J B Horner, Main, Bremen
COTTON—25 bbls, 1,238 gals, Manhattan Oil Co, Albano, Hamburg
ESS'L—1 cs, Selwyn Imp & Trading Co, La Bretagne, Havre
4 cs, 396 lbs, Dodge & Olcott, Main, Bremen
4 cs, Euler & Robeson, La Bretagne, Havre
2 cs, E H Burr, La Bretagne, Havre
55 cs, Fritzsche Bros, Belgravia, Hbg
1 cs, 2 dms, Fritzsche Bros, Belgravia, Hamburg
11 cs, G Lueders & Co, Citta di Milano, Genoa
8 cs, Heine & Co, Main, Bremen
3 cs, Leerburger Bros, Blucher, Hamburg
2 cs, Lehn & Fink, Georgic, Liverpool
EUCALYPTUS—5 cs, 560 lbs, A A Stilwell, Minneapolis, London
FUSEL—37 cks, 20,567 lbs, T Hofacker, Colorado, Hull
39 dms, 26,180 lbs, C B Richards & Co, Colorado, Hull
12 dms, 9,668 lbs, C B Richards & Co, Colorado, Hull
GERANIUM—1 pot, 200 lbs, G Lueders & Co, Tannel, Flez
HAARLEM—50 cs, 7,700 lbs, Stallman & Fulton Co, Amsterdam, Rotterdam
LAVENDER—1 cs, C Rockhill, Citta di Milano, Naples
10 cs, G Lueders & Co, Citta di Milano, Genoa
LEMON—23 cs, 1,000 lbs, Dodge & Olcott, Ixia, Messina
25 cs, 625 lbs, Crandal & Godley Co, Ixia, Messina
43 cs, 1,075 lbs, G Lueders & Co, Ixia, Messina
LUBRICATING—75 bbls, Swan & Finch Co, Georgic, Liverpool
MUSTARD—3 cs, 150 lbs, J B Horner, Main, Bremen
NEROLI—1 cs, C Rockhill, Citta di Milano, Naples
OLIVE FOOTS—100 bbls, 5,000 gals, Perry, Ryer & Co, Capt W Menzell, Seville
100 bbls, 5,000 gals, Geisenheimer & Co, Capt W Menzell, Seville
50 bbls, 2,651 gals, Stallman & Fulton Co, Capt W Menzell, Seville
100 bbls, 5,429 gals, Holbrook Mfg Co, Capt W Menzell, Seville
50 bbls, 2,603 gals, Peters, White & Co, Citta di Milano, Genoa
ORANGE—3 cs, 75 lbs, Dodge & Olcott, Ixia, Messina
10 cs, 250 lbs, Crandal & Godley Co, Ixia, Messina
30 cs, 750 lbs, J B Horner, Ixia, Messina
44 cs, Fritzsche Bros, Ixia, Messina
27 cs, 725 lbs, G Lueders & Co, Ixia, Messina
PALM—26 cks, Colby & Co, Belgravia, Hbg
RAPESEED—300 bbls, 15,153 gals, Standard Oil Co, Minnehaha, London
300 bbls, 15,100 gals, Standard Oil Co, Georgic, Liverpool
SANDAL—1 cs, 66 lbs, J B Horner, Main, Bremen
2 cs, Lehn & Fink, Minnehaha, London
OPIUM—8 cs, 750 ozs, E Levi, Amsterdam, Rotterdam
PAINT, WHITE—50 cks, 22,000 lbs, Gabriel & Schall, Rotterdam, Rotterdam
PALM STEARINE—81 cks, 66,221 lbs, J A & W Bird & Co, Amsterdam, Rotterdam
112 cks, J A & W Bird & Co, Minnehaha, London
PARAFFINE—5 bbls, 2,690 lbs, Napier Chemical Co, St Nicholas, Antwerp
PARIS GREEN—9 cks, F Fezandie, Belgravia, Hamburg
PEPPER—164 bgs, 12,790 lbs, Winter & Smillie, Amsterdam, Rotterdam
1,200 bgs, 122,025 lbs, J W Phyfe & Co, Shimosa, Singapore
PLUMBAGO—10 cks, W H Dumont, Belgravia, Hamburg
400 bgs, 88,000 lbs, C B Richards & Co, Hohenzollern, Genoa
92 cks, 52,490 lbs, J W Hampton, Jr., Hohenzollern, Genoa
POMADE—32 cs, Lehn & Fink, Georgic, Liverpool
POPPY HEADS—2 cs, 404 lbs, McKesson & Robbins, Belgravia, Liverpool
POTASH, CARB—21 cks, A Klipstein & Co, Belgravia, Hamburg
40 cks, 46,576 lbs, Peters, White & Co, Belgravia, Hamburg
30 cks, 33,134 lbs, Peters, White & Co, Blucher, Hamburg
CAUSTIC—5 cs, Troy Laundry & Mach Co, Armenian, Liverpool
CYANIDE—200 cs, 20 tons, Schoellkopf, H & H Co, Minneapolis, London
MURI—1,400 bgs, 314,864 lbs, Peters, White & Co, Main, Bremen
1,000 bgs, 224,000 lbs, Battelle & Renwick, Main, Bremen
1,000 bgs, 224,000 lbs, Battelle & Renwick, Belgravia, Hamburg
750 bgs, 168,630 lbs, P Weidinger & Son, Belgravia, Hamburg
1,440 bgs, 323,769 lbs, P Weidinger & Son, Belgravia, Hamburg
1,000 bgs, 224,000 lbs, Battelle & Renwick, Blucher, Hamburg
OXYLATE—10 cks, 2,653 lbs, Kuttroff, Pickhardt & Co, Zeeland, Antwerp
SULPH—1,000 bgs, 224,840 lbs, Peters, White & Co, Belgravia, Hamburg
PULSATILLA HERB—3 bls, Lehn & Fink, Blucher, Hamburg
PUMICE—34 cs, H Behr & Co, Amsterdam, Rotterdam
60 cs, 9 tons, R J Waddell & Co, Main, Bremen
QUININE—65 cs, 64,100 ozs, E Levi, Amsterdam, Rotterdam
50 cs, 50,000 ozs, Winter & Smillie, Amsterdam, Rotterdam
QUEBRACHO, WOOD—734 tons, Stamford Mfg Co, Levrika, Buenos Ayres
EXTRACT—80 bgs, 8,818 lbs, F Bredt & Co, Amsterdam, Rotterdam
RESORCIN—5 cks, H A Metz & Co, Rotterdam, Rotterdam
RHUBARB—15 cs, 3,600 lbs, Stallman & Fulton Co, Satsuma, Hong Kong
1 cs, Lehn & Fink, Minnehaha, London
SAFFRON— 6 bls, 770 lbs, J W Wilson & Co, Santiago, Nassau
1 cs, 110 lbs, Stallman & Fulton Co, Belgravia, Hamburg
SAGE—106 bls, 27,164 lbs, Guiterman, Rosenfeld & Co, Rotterdam, Rotterdam
SARSAPARILLA—15 bls, 3,742 lbs, Harburger & Stack, Santiago, Tampico

A. Klipstein & Company,

122 PEARL ST., NEW YORK.

Chemicals & Dye Stuffs

AGENTS FOR

ANILINE COLORS

Made by the Society of Chemical Industry, BASLE.

Blood Albumen

BRANCH HOUSES.—BOSTON, 283-285 Congress St. PHILADELPHIA, 50-52 N. Front St. CHICAGO, 136 Kinzie St. PROVIDENCE, R. I., 13 Mathewson St. HAMILTON ONT., Catharine St. MONTREAL, 17 Lemoine St.

Sole Agents for the Society of Chemical Industry, Basle, Switzerland

13 bls, 1,620 lbs, Andreas & Co, Segurance, Colon
SENNA—10 bls, 3,762 lbs, A U Andrus & Co, St Paul, London
40 bls, 16,966 lbs, A U Andrus & Co, Blucher, Hamburg
30 bls, 78,887 lbs, Stallman & Fulton Co, Blucher, Hamburg
SHELLAC—235 cs, Rogers & Pyatt, Minneapolis, London
SOAP BARK—20 bgs, 2,200 lbs, J L Hopkins & Co, Albano, Hamburg
SOAP—28 cs, 3,663 lbs, Schering & Glatz, Amsterdam, Rotterdam
CASTILE—250 cs, 10,384 lbs, J D Nordlinger, Minneapolis, London
SODA—5 dms, 3,733 lbs, Kuttroff, Pickhardt & Co, Zeeland, Antwerp
ASH—101 cks, 167,900 lbs, Heller & Merz Co, Georgic, Liverpool
CAUSTIC—15 cs, 4,700 lbs, Troy Laundry & Mach Co, Armenian, Liverpool
50 dms, 27,665 lbs, A Klipstein & Co, Belgravia, Hamburg
NITRITE—29 cks, 21,776 lbs, A Klipstein & Co, Zeeland, Antwerp
SPONGE—41 bls, Huencke Sponge Co, Santiago, Nassau
37 bls, National Sponge & Chamois Co, Santiago, Nassau
100 bls, Lasker & Bernstein, Santiago, Nassau
22 bls, A Isaacs & Co, Santiago, Nassau
34 bls, A Moses' Sons & Co, Santiago, Nassau
2 cs, Lasker & Bernstein, Belgravia, Hbg
4 bls, Lasker & Bernstein, Minneapolis, London
GUM, CHICLE—115 bls, 20,955 lbs, Thebaud Bros, Havana, Progreso
SCAMMONY—2 cs, E Levi, Amsterdam, Rotterdam
MENTHOL—20 cs, R Brauss & Co, Coastwise, Kobe
MICA—30 cs, 3,090 lbs, Sills-Eddy Mica Co, St Paul, London
OPIUM—7 cs, 1,115 lbs, Scheiffelin & Co, Lucania, Liverpool
5 cs, 861 lbs, R Crooks & Co, Lucania, Liverpool
9 cs, 1,506 lbs, Dodge & Olcott, Oceanic, Liverpool
SPONGE—13 bls, A Isaacs & Co, Santiago, Nassau
71 bls, Lasker & Bernstein, Santiago, Nassau

Withdrawals from Bond.

Week ending Dec. 31.

Alcohol, bbls	4
Aniline colors, cks	20
Bronze powder, cs	6
Chemical salt, cs	10
Chillies, bgs	136
Chloral, hydrate, cs	2
Corks, bls	166
Dextrine, bgs	100
Gelatine, cs	1
Glass, window, cs	580
Logwood, extract, cks	25
Menthol, cs	9
Mica, cs	10
Oil, codliver, bbls	15
Opium, cs	1
Sponge, bls	24

OIL—30 bbls, F L Young & Kimball, Republic, Liverpool
3 cks, B S Edmonds, Boston, Yarmouth, N S
COCOANUT—141 pkgs, Georgian, London
COD—50 cks, J A Flanders, Halifax, Halifax
5 cks, Halifax, Halifax
ESSENTIAL—20 cs, Ainwick, Messina
OLIVE—2 bbls, Ainwick, Naples
100 bbls, Baring Bros & Co, Ainwick, Messina
3 bbls, Lorenzo Martelliti, Ainwick, Messina
10 bbls, Guiseppi Carrisi, Ainwick, Messina
1 bbl, Stellario Belle, Ainwick, Messina
1 bbl, Letterio La Rosa, Ainwick, Messina
12 bbls, Antonio Bicehiere, Ainwick, Messina
5 bbls, C D Constantine, Ainwick, Messina
30 bbls, Geo H Leonard & Co, Georgian, London
PALM—39 cks, Saxonia, Liverpool
81 cks, Sagamore, Liverpool
WHALE—123 cks, Geo H Leonard & Co, Halifax, Halifax
OPIUM—9 cs, R F Downing & Co, Georgian, London
PHOSPHATE—10,500 bgs, Cambrian King, Ant
PITCH, MARINE—28 cs, L W Ferdinand & Co, Georgian, London
POTASH—25 •drs, E Hills & Son, Cambrian King, Antwerp
SALTPETRE—3,026 bgs, Ralli Bros, Simoon, Calcutta
SHELLAC—150 cs, Brown Bros & Co, Simoon, Calcutta
SOAP—80 cs, Republic, Liverpool
600 bxs, Weaver & Sterry, Ainwick, Leghorn
4 cs, R F Downing & Co, Georgian, London
1 bx, Eastern Drug Co, Georgian, London
265 bxs, F Leyland & Co, Georgian, London
SODA—19 cks, W N Proctor & Co, Georgian, London
ASH—27 cks, Morey & Co, Republic, Lpool
SULPHUR—400 tons, Ainwick, Girgenti
SUMAC, EXT—10 cks, Saxonia, Liverpool
VERMILION—1 ck, Carpenter-Morton Co, Saxonia, Liverpool
ZINC, OXIDE—50 cks, J A & W Bird & Co, Cambrian King, Antwerp

Philadelphia Imports.

ACID, CARB CRYS—10 drs, West Point, Ldon
AMMONIA, CARB—34 cks, Westernland, Liverpool
MURIATE—20 cks, Westernland, Liverpool
BARK—10 bls, Adria, Hamburg
BLEACH—378 cks, J L & D S Riker, Merion, Liverpool
156 cks, J L & D S Riker, Westernland, Liverpool
65 cks, Westernland, Liverpool
CHINA CLAY—400 cks, Perkins, Goodwin & Co, Westernland, Liverpool
200 cks, Westernland, Liverpool
CLAY—150 tons, Powers & Weightman, West Point, London
COAL TAR—130 bbls, Westernland, Liverpool
COLOR—201 pkgs, Merion, Liverpool
CORKWOOD—59 bls, Merion, Liverpool
FULLER'S EARTH—300 bgs, West Point, London
GRAPHITE—150 bbls, Brown Bros & Co, Adria, Hamburg
GUM, TRAGACANTH—13 cs, West Point, London
OIL, COCOANUT—299 pkgs, West Point, Ldon
RAPE—10 bbls, Crew-Levick Co, Merion, Liverpool
20 bbls, Westernland, Liverpool
OPIUM—95 cs, Westernland, Liverpool
SALT CAKE—51 cks, Merion, Liverpool
SODA, CHLORATE—20 kegs, J L & D S Riker, Merion, Liverpool
25 kegs, J L & D S Riker, Westernland, Liverpool
ZINC, CHLORIDE—13 drs, Westernland, Liverpool

Baltimore Imports.

AMMONIA, MURIATE—85 tcs, Rowanmore, Liverpool
SULP—1,000 bgs, Orthia, Glasgow
BARK—10 bls, Rowanmore, Liverpool
BARYTES—5 cks, Runo, Rotterdam
BLEACH—338 cks, Rowanmore, Liverpool
BRIMSTONE—3,900 tons, Arion, Girgenti
CHINA CLAY—400 cks, Runo, Rotterdam
1,015 cks, Rowanmore, Liverpool
CLAY—277 tons, Rowanmore, Liverpool
CORKS—30 bls, Runo, Rotterdam
CORKWOOD—400 bls, St Gothard, Huelva
KAINIT, CDE—670 tons, Brandenburg, Bremen
POTASH, MURIATE—1,149 bgs, Brandenburg, Bremen
SODA, NITRATE—69,803 bgs, Anglo-African, Caleta Buena
STRONTIA—10 cks, Runo, Rotterdam
ZINC, CHLORIDE—60 drs, Rowanmore, Lpool

New Orleans Imports.

ACID, CARB CRYS—200 cks, Antillian, Ant
OXALIC—46 cks, Antillian, Antwerp
FULLER'S EARTH—700 bgs, Antillian, Ldon
GUM, CHICLE—161 bls, Olympia, Porto Cortez
OIL, OLIVE—20 cks, Monviso, Palermo

San Francisco Imports.

ACID—26 pkgs, Sierra, Sydney
COPRA—705 bgs, G A Moore & Co, Sierra, Pago Pago
GLUE—37 bls, 26 pkgs, Sierra, Sydney
GLYCERINE—3 drs, Sierra, Sydney
GUM, KAURI—50 cs, Sierra, Auckland
OIL, CAKE—210 bgs, Thannhauser & Co, Acapulco, San Blas
SOAP—500 bxs, Acapulco, Genoa

EXPORTS FROM NEW YORK.

Week ending Dec. 31.

ACID, MURIATIC—300 cbys, $392, Mexico, Havana
75 cbys, $272, Cienfuegos, Cuba
5 cbys, $20, Saratoga, Tampico
NITRIC—1 cby, $6, Daggry, Progreso
SULPHURIC—15 cbys, $60, Fontabelle, Barbadoes
2 cbys, $10, Fontabelle, St Croix
TARTARIC—20 kegs, 2,240 lbs, $515, Braemar, Yokohama
1 cs, $17, Coamo, Porto Rico
ALCOHOL—1 bbl, $15, Saratoga, Nassau
WOOD—80 bbls, $1,600, St Nicholas, Antwerp
800 bbls, $15,650, Belgravia, Hamburg
AMMONIA—3 cs, $87, City of Wash, Colon
ANHY—7 cyls, $359, Hilary, Manaos
SAL—5 bbls, $83, City of Wash, Colon
ANISEED—2 bgs, 204 lbs, $24, Zulia, Maracaibo
ASPHALTUM—15 cs, 875 lbs, $165, Belgravia, Hamburg
BORAX—5 bbls, $136, Coamo, Porto Rico
CALCIUM CARBIDE—306 crts, $842, Mimiro, Melbourne
306 crts, $842, Mimiro, Auckland
90 cs, $280, Sabine, Cape Town
CANDLES—230 cs, $613, Coamo, Porto Rico
6 cs, $14, Zulia, Curacao
103 cs, $188, Mexico, Havana
120 cs, $432, Kong Haakon, Pilley's Is
40 cs, $367, Carib II, Porto Cortez
1,000 cs, $2,850, Mimiro, Wellington
10 cs, $12, Cienfuegos, Cuba
40 cs, $186, Hilary, Manaos
25 cs, 4 crts, $167, City of Wash, Colon

CREAM OF TARTAR. TARTARIC ACID.

GUARANTEED 99—100 Per Cent. Pure.

TARTAR CHEMICAL COMPANY, 92 William Street, NEW YORK.

STRONTIA, NITRATE—48 kegs, Chemical Imp & Mfg Co, Amsterdam, Rotterdam
CARB—3 cks, 2,411 lbs, Schoellkopf, H & H Co, Minneapolis, London
SUMAC, EXT—25 bbls, 12,429 lbs, Oakes Mfg Co, Ixia, Messina
35 bbls, 16,473 lbs, Geigy Aniline & Ext Co, Zeeland, Antwerp
LEAF—200 bls, 117,471 lbs, O S Janney & Co, Ixia, Palermo
TALC—300 bgs, 65,442 lbs, L A Salomon & Bro, Honenzollern, Genoa
200 bgs, 44,092 lbs, Parsons & Petit, Ho Penzollern, Genoa
TEA SWEEPINGS—667 bgs, Hensel B & L, Indrades, Kobe
TOLUIDINE—13 dms, Selling Co, Minneapolis, London
ULTRAMARINE—2 cs, 668 lbs, Heller & Merz Co, Amsterdam, Rotterdam
UMBER—1 ck, C Helmuth, Amsterdam, Rotterdam
VANILA BEANS—2 cs, Lehn & Fink, La Touraine, Havre
VARNISH—10 cs, 4 dms, 300 gals, A E Louderbach, Minneapolis, London
7 cs, 5 crates, 285 gals, F C Reynolds, St Paul, London
VENETIAN RED—303 pkgs, J L Smith & Co, Georgic, Liverpool
VERMILION—5 cks, 550 lbs, A W Smith, Amsterdam, Rotterdam
VIENNA LIME—111 cs, 28,587 lbs, Zucker, Leavitt & L Co, Rotterdam, Rotterdam
WAX, BEES'—4 cs, 1,434 lbs, Harburger & Stack, Santiago, Tampico
CERESIN—200 bgs, 20,220 lbs, C Morningstar & Co, Belgravia, Hamburg
10 bgs, 2,200 lbs, F G Strohmeyer & Arpe, Belgravia, Hamburg
JAPAN—100 cs, Schoellkopf, H & H Co, Shimosa, Kobe
MINERAL—32 bgs, Stallman & Fulton Co, Belgravia, Hamburg
VEGETABLE—33 bgs, 6,129 lbs, Edison Elect Co, Belgravia, Hamburg
WHITE LEAD—3 cks, 1,005 lbs, C Helmuth, Rotterdam, Rotterdam
WITHERITE—600 bgs, 12,200 lbs, Gabriel & Schall, Rotterdam, Rotterdam
ZINC, CHLO—15 bbls, 10,697 lbs, Roessler & H Chem Co, Amsterdam, Rotterdam
SULPH—50 bbls, 27,558 lbs, F L La Venburg Belgravia, Hamburg

WAREHOUSED.

ACID—2 cs, E Levi, Amsterdam, Rotterdam
ANILINE COLORS—94 cks, Cassella Color Co, Amsterdam, Rotterdam
GLUE—60 cks, 20,085 lbs, Miller & Kasschu, Colorado, Hull
20 cks, 8 Isaacs & Co, Amsterdam, Rdam

Boston Imports.

ACID, CRESYLIC—4 drs, Lever Bros, Ltd, Sagamore, Liverpool
PHOS—1 cs, R F Downing & Co, Georgian, London
ANILINE, COLOR—74 bbls, J D Lewis, Cambrian King, Antwerp
8 cks, Amer Ex Co, Cambrian King, Ant
73 pkgs, Cambrian King, Antwerp
SALT—104 drs, Amer Ex Co, Cambrian King, Antwerp
118 cks, C Bischoff & Co, Cambrian King, Antwerp
BLEACH—275 cks, J L & D S Riker, Saxonia, Liverpool
148 cks, J L & D S Riker, Sagamore, Liverpool
42 cks, Arnold, Hoffman & Co, Sagamore, Liverpool
BRISTLES—16 pkgs, J C Pushee & Sons, Georgian, London
7 cs, Amer Ex Co, Cambrian King, Ant
CHALK—300 tons, L A Salomon & Bro, Georgian, London
CHEMICAL SALTS—36 cks, Amer Ex Co, Cambrian King, Antwerp
CHINA CLAY—582 cks, Baring Bros & Co, Saxonia, Liverpool
9 cks, L A Salomon & Bro, Saxonia, Lpool
1,101 cks, Sagamore, Liverpool
25 cks, Perkins, Goodwin & Co, Republic, Liverpool
COLOR—4 cks, F Leyland & Co, Georgian, London
1 ck, Hugh Wright & Co, Republic, Lpool
EARTH—37 pkgs, 10 bbls, 5 cs, Cambrian King, Antwerp
CORKS—4 bls, F Leyland & Co, Georgian, London
CREAM TARTAR—5 cks, F Leyland & Co, Georgian, London
DRUGS—6 pkgs, R F Downing & Co, Georgian, London
6 cs, Georgian, London
ETHER—1 cs, R F Downing & Co, Georgian, London
FULLER'S EARTH—200 bgs, L A Salomon & Bro, Georgian, London
GLASS, PLATE—7 cs, B D Webber, Cambrian King, Antwerp
WINDOW—4,830 cs, Amer Ex Co, Cambrian King, Antwerp
4,901 cs, Baring Bros & Co, Cambrian King, Antwerp
850 cs, Cambrian King, Antwerp
GLUE—10 cs, Georgian, London
37 cks, Amer Ex Co, Cambrian King, Ant
5 cs, Cambrian King, Antwerp
GREASE—97 cs, 280 cks, Geo H Leonard & Co, Cambrian King, Antwerp
WOOL—100 bbls, Kidder, Peabody & Co, Cambrian King, Antwerp
MICA—6 cs, Pitt & Scott, Georgian, London
NITRE—6 cs, R F Downing & Co, Georgian, London
NUTMEGS—8 cs, Georgian, London
2 cs, $7, Pretoria, Bermuda
250 cs, $433, Havana, Vera Cruz
2 cs, $6, Saratoga, Nassau
30 cs, $79, Fontabelle, Demerara
101 cs, 2 crts, $144, Fontabelle, Barbadoes
CARBON—7 cs, $95, Mimiro, Melbourne
25 cs, $375, St Nicholas, Antwerp
30 bbls, $300, Minneapolis, London
CASSIA—5 bls, $30, Coamo, Porto Rico
5 cs, $105, Fontabelle, Demerara
1 bl, $6, Fontabelle, St Thomas
CHEMICALS—10 cks, 5,600 lbs, $1,265, Colorado, Hull
CINNAMON—1 bl, 50 lbs, $9, Zulia, Maracaibo
6 bls, 601 lbs, $104, Cienfuegos, Cuba
7 bls, 675 lbs, $120, Daggry, Campeche
9 bls, 899 lbs, $150, Havana, Vera Cruz
CLOVES—3 bgs, 318 lbs, $42, Saratoga, Tampico
COLOR—1 bbl, $62, Braemar, Kobe
10 cs, $240, La Bretagne, Havre
5 tcs, $60, Minneapolis, London
COPPER SULPHATE—1 bbl, 470 lbs, $26, Cienfuegos, Cuba
CORIANDER SEED—40 bgs, 4,012 lbs, $147, Talisman, Demerara
COTTONSEED—23 bgs, 2,745 lbs, $460, Minneapolis, London
CUMMIN SEED—2 bgs, 224 lbs, $13, Zulia, Maracaibo
3 bgs, $29, City of Wash, Colon
DYEWOOD EXT—1 bbl, 270 bxs, 18,955 lbs, $1,086, Zeeland, Antwerp
35 bxs, 1,550 lbs, $462, Belgravia, Hamburg
FERTILIZER—420 bgs, $1,588, Coamo, Porto Rico
465 bgs, 245 bbls, $1,042, Pretoria, Bermuda
41 bbls, $233, Saratoga, Nassau

POTASH
CYANIDE
PRUSSIATE
CARBONATE
CAUSTIC and
All Heavy and Fine Chemicals

Soda Ash
Soda Prussiate
Sal Soda
Caustic Soda
Etc.

ACID
Acetic
Phosphoric
Carbolic
Etc.

Extracts
Gums

ZINC DUST.

IMPORTERS—Commission Merchants—EXPORTERS.

FUERST BROS. & CO.

2 Stone St., NEW YORK, & 17 Bridge St.

Bleaching Powders

MINERALS
Fluorspar
Fullers Earth
China Clay
Barytes, Etc.

OILS
CASTOR
OLIVE
RAPE
COCOANUT
ESSENTIAL

CORRESPONDENCE SOLICITED.

FORMALDEHYDE—2 cbys, $48, Saratoga, Nassau
GLUCOSE—184 bbls, $2,275, Mimiro, Melbourne
250 bbls, $3,000, Armenian, Liverpool
300 bbls, $5,000, St Nicholas, Antwerp
165 bbls, $2,146, Sabine, Cape Town
360 bbls, $4,300, Corinthian, Glasgow
300 bbls, $3,000, Colorado, Hull
770 bbls, $7,700, Buffon, Manchester
240 bbls, $2,924, Lucania, Liverpool
2,680 bbls, $31,296, Minneapolis, London
30 bbls, $404, Havana, Havana
GLUE—1 bbl, 295 lbs, $31, Coamo, Porto Rico
4 cs, $14, Mimiro, Melbourne
6 cs, $25, Armenian, Liverpool
3 cs, $80, Hellig Olav, Copenhagen
2 bbls, $39, Zeeland, Antwerp
1 hf bbl, $8, Daggry, Progreso
1 cs, $5, St Paul, Southampton
4 bbls, $115, Havana, Havana
5 bbls, $125, Havana, Vera Cruz
12 bbls, 2,302 lbs, $293, Saratoga, Tampico
FISH—1 hf bbl, $29, La Bretagne, Havre
GRAPE SUGAR—1,500 bgs, 168,000 lbs, $5,040, Armenian, Liverpool
500 bgs, 56,000 lbs, $2,000, Corinthian, Glasgow
1,000 bgs, 112,000 lbs, $2,200, Buffon, Manchester
3,500 bgs, 392,000 lbs, $7,600, Minneapolis, London
400 bgs, 44,800 lbs, $800, St Paul, Southampton
4,000 bgs, 448,000 lbs, $8,500, Exeter City, Bristol
GRAPHITE—1 bbl, 2 cs, 458 lbs, $57, Belgravia, Hamburg
GREASE SOAP—1 tce, $31, Mexico, Havana
250 tcs, $3,632, Armenian, Liverpool
139 tcs, $6,500, Citta di Milano, Genoa
LUB—30 cs, $64, Braemar, Singapore
8 bbls, 51 cs, $386, Braemar, Kobe
4 bbls, $20, Coamo, Porto Rico
13 bbls, 36 cs, 100 kegs, 180 pkgs, $426, Mimiro, Wellington
142 bbls, 59 kegs, 91 cs, $1,829, Mimiro, Melbourne
130 bbls, 8 kegs, $752, Armenian, Liverpool
28 bbls, 85 kegs, $387, Cienfuegos, Cuba
1 cs, $6, Hilary, Manaos
12 cs, 1 keg, $47, City of Wash, Colon
34 cs, $62, Sabine, Cape Town
125 bbls, $1,792, Citta di Milano, Genoa
531 bbls, 1 cs, $6,790, Zeeland, Antwerp
50 bbls, $644, Buffon, Manchester.
1 cs, $9, Belgravia, Hamburg
1 cs, $10, Daggry, Progreso
50 bbls, 20 cs, $690, Minneapolis, London
9 bbls, 1 cs, $77, Lucania, Liverpool
12 bbls, 16 kegs, $172, Havana, Havana
1 bbl, $9, Fontabelle, Barbadoes
MINERAL—625 bbls, $3,780, Armenian, Liverpool
2 bbls, $60, Maraval, Port of Spain
GUM, CHICLE—15 bgs, 2,775 lbs, $540, Mimiro, Melbourne
KAURI—1 cs, 195 lbs, $30, Mimiro, Auckland
KALSOMINE—10 cs, $88, Armenian, Lpool
LAMP BLACK—2 bbls, $8, Havana, Vera Cruz
6 bbls, $47, Saratoga, Tampico
LEAD—2,091 pigs, 224,040 lbs, $5,000, St Nicholas, Antwerp
5,242 pigs, 560,087 lbs, $12,500, Armenian, Liverpool
528 pigs, 56,224 lbs, $1,250, Hellig Olav, Copenhagen
5,527 pigs, 447,816 lbs, $10,000, Corinthian, Glasgow
5,766 pigs, 560,035 lbs, $13,701, Buffon, Manchester
4,194 pigs, 448,252 lbs, $10,000, Zeeland, Antwerp
5,883 pigs, 560,030 lbs, $14,000, Belgravia, Hamburg
418 pigs, 44,837 lbs, $1,000, Ixia, Trieste
1,035 pigs, 112,088 lbs, $2,500, Ixia, Venice
LIME, ACETATE—1,742 bgs, 243,853 lbs, $3,913, Colorado, Hull
388 bgs, 46,415 lbs, $800, Citta di Milano Genoa
5,242 bgs, 717,467 lbs, $12,350, Zeeland, Antwerp
LINSEED, CAKE—4,801 bgs, 1,792,000 lbs, $20,600, St Nicholas, Antwerp
6,755 bgs, 1,832,350 lbs, $20,750, Zeeland, Antwerp
MEAL—1,000 bgs, 110,000 lbs, $1,275, Amsterdam, Rotterdam
LUBRICATING COMP—18 cs, $360, Corinthian, Glasgow
MICA—23 bgs, $75, Minneapolis, London
OCHER—224 bbls, $450, Minneapolis, London
OIL, ALMOND—3 cs, $28, Carib II, Porto Cortez
4 cs, $48, Havana, Vera Cruz
CAKE—11,250 bgs, 3,532,974 lbs, $35,000, St Nicholas, Antwerp
1,771 bgs, 491,957 lbs, $5,534, Armenian, Liverpool
3,800 bgs, 952,004 lbs, $14,407, Zeeland, Ant
CASTOR—1 cs, $8, Zulia, Curacao
2 cs, $14, Carib II, Truxillo
5 cs, $36, City of Washington, Colon
COD—20 bbls, $343, Mimiro, Melbourne
CODLIVER—50 bbls, $4,866, Minneapolis, London
CORDAGE—200 bbls, $1,185, Mexico, Havana
CORN—120 bbls, $1,900, Hellig Olav, Helsingborg
100 bbls, $1,500, Hellig Olav, Odense
65 bbls, $940, Corinthian, Glasgow
410 bbls, $6,000, Zeeland, Antwerp
COTTONSEED—100 cs, $445, Braemar, Kobe
40 cs, $201, Coamo, Porto Rico
6 bbls, $122, Mimiro, Melbourne
250 bbls, 100 cs, $5,900, Talisman, Guadeloupe
200 bbls, $4,500, Talisman, Martinique
10 bbls, $187, Armenian, Liverpool
8 bbls, $166, Cienfuegos, Cuba
680 bbls, $14,031, Hellig Olav, Stettin
50 bbls, $996, Hellig Olav, Koenigsberg
50 bbls, $1,170, Hellig Olav, Bergen
100 bbls, $1,500, Hellig Olav, Copenhagen
40 cs, $143, City of Washington, Colon
3 bbls, 110 cs, $575, Sabine, Cape Town
75 bbls, $1,125, Corinthian, Glasgow
50 bbls, $*,000, Colorado, Hull
50 bbls, $946, Citta di Milano, Genoa
50 bbls, $755, Zeeland, Antwerp
155 bbls, $2,751, Bellaggio Rio Janeiro
15 bbls, $300, Talisman, Demerara
3 cs, $16, Daggry, Campeche
869 bbls, $16,061, Minneapolis, London
6 bbls, $132, Havana, Havana
70 bbls, $1,381, Fontabelle, Demerara
115 bbls, $2,245, Fontabelle, Martinique
17 bbls, $303, Fontabelle, Barbadoes
1 bbl, $18, Fontabelle, St Thomas
50 bbls, $997, Ixia, Venice
150 bbls, $2,515, Ixia, Malta
CYLINDER—150 gls, $60, Zulia, Maracaibo
2,000 gls, $440, Hilary, Manaos
758 gls, $243, Kong Haakon, Pilleys Is, N F
50 gls, $16, Fontabelle, Barbadoes
ESS'L—10 cs, $787, Colorado, Hull
8 cs, $1,287, Belgravia, Hamburg
90 cs, $7,319, Minneapolis, London
6 cs, $550, Havana, Havana
LARD—4,400 gls, $2,805, Sabine, Cape Town
1,500 gls, $1,435, La Bretagne, Havre
1,250 gls, $1,100, Belgravia, Hamburg
500 gls, $198, Fontabelle, Barbadoes
LINSEED—500 gls, $206, Braemar, Manila
800 gls, $384, Coamo, Porto Rico
50 gls, $22, Carib II, Truxillo
6,377 gls, $2,264, Fort George, Sydney
50 gls, $31, Hilary, Manaos
40 gls, $27, City of Washington, Colon
300 gls, $76, Minneapolis, London
200 gls, $78, Havana, Havana
100 gls, $40, Havana, Vera Cruz
150 gls, $60, Saratoga, Nassau
60 gls, $27, Saratoga, Tampico
LUB—16,745 gls, $3,237, Braemar, Sourabaya
22,450 gls, $5,721, Braemar, Kobe
7,500 gls, $1,906, Braemar, Batavia
500 gls, $112, Braemar, Manila
41,800 gls, $7,205, Belgravia, Homburg
12,500 gls, $1,500, Johana, Hong Kong
100 gls, $20, Clara, Macoris
14,070 gls, $2,162, Mimiro, Melbourne
25,440 gls, $4,842, Mimiro, Auckland
40,950 gls, $5,035, St Nicholas, Antwerp
58,100 gls, $8,383, Armenian, Liverpool
16,546 gls, $2,485, Torgoran, Dunkirk
30,667 gls, $2,639, Fort George, Sydney
1,750 gls, $400, Micmac, Havre
9,270 gls, $3,407, Cienfuegos, Cuba
5,600 gls, $1,055, Hilary, Para
300 gls, $71, Amsterdam, Rotterdam
400 gls, $120, City of Washington, Colon
2,400 gls, $840, Sabine, Cape Town
549 gls, $82, Kong Haakon, Pilleys Is, N F
92,750 gls, $11,130, Corinthian, Glasgow
129,100 gls, $15,527, Colorado, Hull
44,400 gls, $750, Citta di Milano, Genoa
5,000 gls, $750, Citta di Milano, Palermo
8,896 gls, $2,539, La Bretagne, Havre
1,500 gls, $275, Buffon, Manchester
59,000 gls, $7,779, Zeeland, Antwerp
150 gls, $40, Bellaggio, Pernambuco
500 gls, $84, Talisman, Demerara
1,000 gls, $305, Daggry, Progreso
15,250 gls, $5,415, Lucania, Liverpool
30,300 gls, $4,260, Minneapolis, London
3,500 gls, $368, Havana, Havana
1,400 gls, $418, Havana, Vera Cruz
5,000 gls, $611, Saratoga, Tampico
1,000 gls, $135, Fontabelle, Barbadoes
4,750 g.s, $1,474, Fontabelle, St Thomas
1,250 gls, $300, Exeter City, Bristol
MEAL—500 bgs, 62,500 lbs, $780, Talisman, Barbadoes
20 bgs, 2,500 lbs, $33, Talisman, Demerara
200 bgs, 25,000 lbs, $313, Fontabelle, Demerara
20 bgs, 2,500 lbs, $32, Fontabelle, Martinique
504 bgs, 63,000 lbs, $775, Fontabelle, Barbadoes
10 bgs. 1,250 lbs, $18, Fontabelle, St Croix
MIN'L COLZA—5,000 gls, $600, St Nicholas, Antwerp
22,000 gls, $2,640, Armenian, Liverpool
15,000 gls, $1,800, Corinthian, Glasgow
3,000 gls, $360, Citta di Milano, Genoa
2,500 gls, $300, Zeeland, Antwerp
NEATSFOOT—10 gls, $8, City of Wash, Colon
30 gls, $14, Belgravia, Hamburg
OLEO—70 tcs, $2,250, Armenian, Liverpool
2,132 tcs, $67,500, Amsterdam, Rotterdam
50 tcs, $1,700, Hellig Olav, Copenhagen
100 tcs, $2,825, Hellig Olav, Esbjerg
135 tcs, $4,975, Colorado, Hull
30 tcs, $950, Zeeland, Antwerp
750 tcs, $26,467, Belgravia, Hamburg
180 bbls, $5,000, Ixia, Trieste
PALM—1 bbl, $26, Zulia, Maracaibo
2 bbls, $50, City of Wash, Colon
PEP—1 cs, $79, Mimiro, Auckland
10 bxs, $100, Belgravia, Hamburg
PUTTY—15 bls, $110, Georgic, Liverpool
RED—3 bbls, $59, Cienfuegos, Cuba
SEWING MACH—20 cs, $107, Mimiro, Auckland
29 cs, $125, Mimiro, Melbourne
3 cs, $6, Hilary, Para
10 cs, $46, Teutonic, Liverpool
8 cs, $32, City of Wash, Colon
5 cs, $15, Sabine, Cape Town
5 cs, $16, Colorado, Hull
15 cs, $55, Minneapolis, London
4 cs, $12, Havana, Vera Cruz
548 pkgs, $1,453, Saratoga, Nassau
15 cs, $38, Saratoga, Tampico
WORMSEED—1 cs, $135, Belgravia, Hamburg
PAINT—1 cs, $8, Braemar, Yokohama
3 bbls, 1 cs, $120, Coamo, Porto Rico
4 cs, $24, Zulia, Curacao
3 cs, 7 bbls, $202, Zulia, Maracaibo
1 bbl, $52, Mexico, Havana
36 cs, $142, Mimiro, Auckland
18 bbls, 442 cs, 200 kegs, $3,254, Mimiro, Melbourne
6 bbls, 11 cs, $732, Armenian, Liverpool
20 cs, $280, Fort George, Sydney
4 cs, $85, Cienfuegos, Cuba
4 cs, $83, Hilary, Para
4 cs, $32, Teutonic, Liverpool
9 cs, 3 kegs, $139, City of Wash, Colon
6 cs, $206, Sabine, Cape Town
56 drs, $300, Corinthian, Glasgow
2 cs, $57, La Bretagne, Havre
1,057 cs, $3,687, Zeeland, Antwerp
10 cs, $601, Bellaggio, Rio Janeiro
4 cs, $37, Talisman, Demerara
3 cs, $42, Belgravia, Hamburg
22 kegs, 5 cs, 1 bbl, $246, Daggry, Progreso
6 cs, 1 bbl, $304, Minneapolis, London
1 cs, $5, Pretoria, Bermuda
1 cs, $15, St Paul, Southampton
8 bbls, 2 cs, $261, Havana, Havana
12 bbls, 10 cs, $349, Havana, Vera Cruz
6 bbls, 11 cs, $251, Saratoga, Nassau
2 bbls, 13 cs, $243, Saratoga, Tampico
PAPER FINISH—8 cs, $105, Corinthian, Glasgow
7 cks, $100, Exeter City, Bristol
PEPPER—1 bg, $13, Zulia, Curacao
7 bgs, $98, Zulia, Maracaibo
3 bgs, $50, Carib II, Truxillo
11 bgs, $190, Daggry, Campeche
2 bgs, $15, Havana, Vera Cruz
5 bgs, $71, Saratoga, Tampico
PETROLEUM—(See Petroleum Clearances on page 28)
PETROLEUM JELLY—1 cs, $10, Braemar, Hong Kong
2 bbls, 4 cs, $78, Mimiro, Wellington
3 bbls, 15 cs, $289, Mimiro, Melbourne
5 cs, $36, Armenian, Liverpool
10 cs, $256, Amsterdam, Rotterdam
2 cs, $9, Sabine, Cape Town
68 cs, 100 pkgs, $1,030, Colorado, Hull
60 cs, $659, La Bretagne, Havre
10 bbls, $302, Zeeland, Antwerp
30 pkgs, $316, Lucania, Liverpool
599 cs, $5,354, Minneapolis, London
2 cs, $41, Fontabelle, Demerara
PIMENTO—1 bg, 156 lbs, $12, Zulia, Maracaibo
PITCH—5 bbls, $12, Talisman, Demerara
16 bbls, $32, Havana, Progreso
10 bbls, $30, Fontabelle, Martinique
PLUMBAGO—3 cs, $23, Mimiro, Melbourne
10 bbls, $320, Belgravia, Hamburg
2 kegs, $28, Daggry, Progreso
20 kegs, $50, St Paul, Southampton
POTASH—10 cs, 1,100 lbs, $420, Belgravia, Hamburg
15 cks, 10 kegs, 11,484 lbs, $1,057, Minneapolis, London
ROSIN—110 bbls, $582, Braemar, Kobe
5 bbls, $23, Carib II, Porto Cortez
215 bbls, $1,380, Mimiro, Melbourne
265 bbls, $1,791, Mimiro, Auckland
16 bbls, $77, Cienfuegos, Cuba
155 bbls, $444, Hilary, Para
65 bbls, $276, City of Washington, Colon
200 bbls, $1,548, Bellaggio, Santos
534 bbls, $3,707, Minneapolis, London
33 bbls, $118, Havana, Vera Cruz
6 bbls, $50, Saratoga, Tampico
6 bbls, $25, Fontabelle, Demerara
5 bbls, $20, Fontabelle, Barbadoes
SALTPETRE—20 cs, 2,600 lbs, $148, Zulia, Maracaibo
SARSAPARILLA—20 bls, 3,619 lbs, $650, Minneapolis, London
SHEEP DIP—4 cs, $72, City of Washington, Colon
SHELLAC—6 bbls, 1 cs, $97, Braemar, Manila
SOAP—6 cs, $29, Braemar, Manila
4 cs, $184, Braemar, Samarang
19 cs, $415, Braemar, Batavia
8 cs, $399, Braemar, Sourabaya
6 cs, $325, Braemar, Kobe
817 cs, $1,667, Coamo, Porto Rico
354 cs, $293, Zulia, Curacao
1 bbl, $43, Mexico, Havana
2 cs, $8, Kong Haakon, Pilleys Is, N F
82 cs, $397, Carib II, Porto Cortez
31 cs, $1,049, Mimiro, Auckland
86 cs, $1,669, Mimiro, Melbourne
2 cs, $128, St Nicholas, Antwerp
83 cs, $4,178, Armenian, Liverpool
50 cs, $150, Adirondack, Santa Marta
15 cs, $592, Cienfuegos, Cuba
3 cs, $36, Hilary, Manaos
4 cs, $49, Teutonic, Liverpool
1 cs, $15, Amsterdam, Rotterdam
1 cs, $27, Hellig Olav, Copenhagen
1 cs, $10, Hellig Olav, Reval
221 cs, $486, City of Washington, Colon
52 cs, $524, Sabine, Cape Town
3 cs, $75, Colorado, Hull
1 cs, $297, Seguranca, Colon
5 cs, $188, Bellaggio, Rio Janeiro
1 cs, $4, Talisman, Barbadoes
2 cs, $30, Talisman, Demerara
4 cs, $169, Belgravia, Hamburg
1 cs, $22, Daggry, Progreso
56 cs, $2,111, Minneapolis, London
57 cs, 2 bbls, $273, Pretoria, Bermuda
5 cs, $500, St Paul, Southampton
10 cs, $161, Havana, Havana
108 cs, $268, Havana, Vera Cruz
28 cs, $82, Saratoga, Nassau
644 cs, $1,482, Fontabelle, Demerara
154 cs, $225, Fontabelle, Barbadoes
SODA, ASH—3 bbls, 985 lbs, $13, Zulia, Maracaibo
BICARB—4 bgs, 400 lbs, $8, Zulia, Maracaibo
1 bbl, 400 lbs, $7, City of Washington, Colon
1 keg, 112 lbs, $2, Pretoria, Bermuda
2 drs, 2,384 lbs, $19, Havana, Havana
16 kegs, 1,792 lbs, $23, Havana, Vera Cruz
CAUSTIC—3 drs, 2,400 lbs, $67 Zulia, Maracaibo
SAL—4 bbls, 1,500 lbs, $70, Mexico, Havana
1 bbl, 397 lbs, $4, Cienfuegos, Cuba
1 bbl, 375 lbs, $3, Pretoria, Bermuda
SIL—12 bbls, 7,416 lbs, $59, Havana, Vera Cruz
SPERMACETI—2,532 lbs, $506, Armenian, Liverpool
60 cs, 3,840 lbs, $850, Buffon, Manchester
50 cs, 3,200 lbs, $725, Minneapolis, London
SPONGE—14 bls, $1,000, Zeeland, Antwerp
STARCH—25 bbls, 20 cs, 10 bgs, $223, Coamo, Porto Rico
10 pkgs, 50 pkgs, $69, Mexico, Havana
200 bgs, $868, Buffon, Manchester
3 bbls, 1 keg, $52, Mimiro, Melbourne
1,200 bgs, $16,800, St Nicholas, Antwerp
200 bgs, 25 bbls, $1,350, Armenian, Lpool
200 bgs, $1,100, Corinthian, Glasgow
6,500 bgs, $27,920, Buffon, Manchester
4 bbls, $36, Bellaggio, Rio Janeiro
450 bgs, $3,090, Minneapolis, London
23 cs, 3 bbls, $58, Pretoria, Bermuda
5 bbls, 10 cs, $117, Havana, Havana
32 cs, 1 bbl, $56, Saratoga, Nassau
3 cs, $8, Fontabelle, Barbadoes
2 bbls, $17, Fontabelle, St Thomas
STEARINE—9 tcs, 4,956 lbs, $17, Zeeland, Antwerp
COTTONSEED—50 bbls, 19,277 lbs, $1,050, Hellig Olav, Konigsberg
TALLOW—50 hhds, 50 tcs, 85,573 lbs, $5,722, Armenian, Liverpool
3 bbls, 952 lbs, $80, Hilary, Para
210 tcs, 92,447 lbs, $3,675, Hellig Olav, Gothenburg
2 tcs, 803 lbs, $54, Talisman, Demerara
225 tcs, 83,964 lbs, $4,977, Belgravia, Hbg
50 bxs, 1,250 lbs, $91, Fontabelle, Barbadoes
TAR—12 bbls, $60, Coamo, Porto Rico
4 bbls, $9, Talisman, Demerara
2 bbls, $10, Havana, Vera Cruz
8 bbls, $40, Saratoga, Tampico
COAL—1 bbl, $5, Pretoria, Bermuda
TURPENTINE—1,500 cs, $9,750, Braemar, Manila
2 cs, $17, Coamo, Porto Rico
2 cs, $12, Zulia, Curacao
3 cs, $20, Carib II, Truxillo
655 cs, $4,095, Mimiro, Auckland
155 cs, $924, Mimiro, Melbourne
2 bbls, 40 cs, $277, Cienfuegos, Cuba
141 cs, 3 bbls, $1,015, Hilary, Para
9 cs, $61, City of Wash, Colon
310 cs, $1,096, Sabine, Cape Town
150 cs, $981, Bellaggio, Rio Janeiro
2 cs, 1 bbl, $39, Talisman, Demerara
1 bbl, $31, Daggry, Progreso
20 cs, $119, Havana, Vera Cruz
10 cs, $58, Havana, Havana
2 cs, $10, Saratoga, Tampico
VANILLA BEANS—46 cs, $2,293, Belgravia, Hamburg
VARNISH—50 gls, $71, Braemar, Manila
10 gls, $7, Zulia, Maracaibo
30 gls, $65, Mimiro, Melbourne
462 gls, $743, Mimiro, Auckland
300 gls, $75, Armenian, Liverpool
50 gls, $22, Cienfuegos, Cuba
55 gls, $27, Hilary, Manaos
170 gls, $130, City of Wash, Colon
20 gls, $31, Sabine, Cape Town
250 gls, $478, La Bretagne, Havre
25 gls, $10, Talisman, Demerara
6,500 gls, $7,500, Belgravia, Hamburg
170 gls, $220, Daggry, Progreso
8,425 gls, $3,525, Minneapolis, London
28 gls, $42, Pretoria, Bermuda
170 gls, $105, Havana, Havana
442 gls, $498, Havana, Vera Cruz
20 gls, $29, Saratoga, Nassau
180 gls, $162, Saratoga, Tampico
30 gls, $18, Fontabelle, Demerara
WAX, MINERAL—7 bgs, $120, St Paul, Southampton
PAR—100 cs, 10,195 lbs, $1,200, Johana, Hong Kong
5 bbls, 200 cs, 50,820 lbs, $2,428, Mimiro, Melbourne
170 cs, 41,095 lbs, $2,105, Mimiro, Wellington
250 cs, 30 bgs, 68,691 lbs, $3,360, St Nicholas, Antwerp
1,440 bbls, 50 cs 416,853 lbs, $21,221, Armenian, Liverpool
5 cs, 1,419 lbs, $99, Hilary, Para
300 bgs, 71,600 lbs, $3,600, Hellig Olav, Konigsberg
620 bbls, 150 cs, 239,434 lbs, $11,970, Corinthian, Glasgow
235 bgs, 56,631 lbs, $2,823, Citta di Milano, Genoa
428 bbls, 151,358 lbs, $8,000, Buffon, Manchester
70 bbls, 700 cs, 198,506 lbs, $9,610, Zeeland, Antwerp
1,780 bbls, 705,825 lbs, $35,290, Minneapolis, London
200 bgs, 30,321 lbs, $1,857, Saratoga, Tampico
WHITE LEAD—120 kegs, $315, Saratoga, Nassau
7 kegs, $42, Saratoga, Tampico
WHITING—1 bbl, $2, Daggry, Progreso
WITCH HAZEL—1 bbl, $27, Minneapolis, London
WOOD FILLER—33 cs, $308, Minneapolis, London
ZINC DROSS—143,641 lbs, $5,532, Armenian, Liverpool
22 slabs, 2,240 lbs, $80, Minneapolis, London
OXIDE—200 bbls, 44,100 lbs, $1,300, St Nicholas, Antwerp
100 bbls, 22,400 lbs, $1,000, Armenian, Liverpool
700 bbls, 154,350 lbs, $5,775, Hellig Olav, Copenhagen
300 bbls, 67,200 lbs, $3,000, Buffon, Manchester
100 bbls, 24,255 lbs, $700, Belgravia, Hamburg
500 bbls, 122,500 lbs, $5 900, Minneapolis, London
50 bbls, 11,025 lbs, $350, Ixia, Venice

FORMALDEHYDE, 40 Volume %
OXALIC ACID
ANILINE SALT
GERMAN CARBOLIC ACID, Spot and to arrive
ANTIMONY SALT
C. BISCHOFF & CO. 88 Park Place, . . . NEW YORK.

WHITE—10 bbls, 3,000 lbs, $171, Daggry, Progreso

Boston Exports.

GLUE, FISH—10 bbls, $625, Consuelo, Hull
10 kgs, 3 bbls, $300, Columbian, London
GREASE—14 bbls, $260, Consuelo, Hull
OIL, CAKE—320 sks, $550, Sardinian, Glasgow
ENGINE—2 bbls, $43, Halifax, Halifax
LARD—50 bbls, $1,265, Ultonia, Liverpool
MEAL—199 bgs, $259, Boston, Yarmouth, N S
OLEO—150 tcs, $3,300, Consuelo, Hull
PAINT—1 cs, $18, Boston, Yarmouth, N S
60 cs, $948, Columbian, London
SOAP—9 bxs, $35, Admiral Dewey, Pt Antonio, Jamaica
28 cs, $600, Ultonia, Liverpool
POWDER—1 bbl, $20, Admiral Dewey, Pt Antonio, Jamaica
STARCH—50 bbls, $419, Columbian, London
2 bbls, $22, Boston, Yarmouth, N S
TALLOW—175 tcs, $3,738, Ultonia, Liverpool
164 tcs, $4,264, Consuelo, Hull
VARNISH—1 bbl, $25, Halifax, St John's, N F
1 cs, $3, Boston, Yarmouth, N S

Philadelphia Exports.

GLUE—20 bbls, Potomac, Liverpool
95 bbls, Lackawanna, Dublin
GRAPHITE—87 cs, Assyria, Hamburg
GREASE—20 bbls, Assyria, Hamburg
LINSEED, CAKE—9,414 bgs, Belgenland, Ant
OIL, CAKE—684 bgs, Belgenland, Antwerp
LUB—171,593 gls, Potomac, Liverpool
90,999 gls, Belgenland, Antwerp
152,318 gls, Assyria, Hamburg
MIN'L COLZA—10,000 gls, Belgenland, Ant
NEATSFOOT—10 bbls, Belgenland, Antwerp
71 bbls, Assyria, Hamburg
OLEO—345 tcs, Assyria, Hamburg
PAINT—15 bbls, Lackawanna, Dublin
ROSIN—500 bbls, Assyria, Hamburg
SOAP—10 bbls, Assyria, Hamburg
TALLOW—50 tcs, Belgenland, Antwerp
TURPENTINE—30 cs, Jules Henri, Marseilles
WAX, PAR—450 cs, Belgenland, Antwerp
2,700 bgs, Assyria, Hamburg

Baltimore Exports.

BARK—375 bgs, Pallanza, Hamburg
GLUCOSE—60 bbls, Lord Erne, Belfast
GREASE—75 tcs, Pallanza, Hamburg
LINSEED, CAKE—1,935 bgs, Lord Erne, Belfast
OIL, CAKE—351 bgs, Marina, Glasgow
224 bgs, Oldenburg, Bremen
500 bgs, Pallanza, Hamburg
4,807 bgs, Queen Wilhelmina, Rotterdam
COTTONSEED—100 bbls, Marina, Glasgow
250 bbls, Vedamore, Liverpool
500 bbls, Queen Wilhelmina, Rotterdam
FISH—700 bbls, Marina, Glasgow
LARD—35 bbls, Silvia, Hamburg
LUB—182 bbls, Oldenburg, Bremen
776 bbls, Pallanza, Hamburg
428 bbls, Vedamore, Liverpool
120 bbls, Queen Wilhelmina, Rotterdam
60 bbls, Missouri, London
NEATSFOOT—30 bbls, Pallanza, Hamburg
OLEO—174 bbls, Pallanza, Hamburg
100 tcs, Queen Wilhelmina, Rotterdam
110 tcs, Silvia, Hamburg
RED—75 bbls, Oldenburg, Bremen
ROSIN—700 bbls, Oldenburg, Bremen
200 bbls, Marina, Glasgow
650 bbls, Pallanza, Hamburg
2 bbls, Vedamore, Liverpool
2,000 bbls, Missouri, London
500 bbls, Silvia, Hamburg
STARCH—800 bgs, Vedamore, Liverpool
2,500 bxs, 20 crts, Queen Wilhelmina, Rotterdam
TALLOW—225 tcs, Pallanza, Hamburg
WAX, PAR—120 bbls, Marina, Glasgow
100 bbls, Vedamore, Liverpool
25 bbls, Missouri, London

Savannah Exports.

COTTONSEED, MEAL—816 bgs, $1,632, Wartburg, Gothenburg
OIL, COTTONSEED—750 bbls, $15,516, Axminster, Riga
ROSIN—525 bbls, $3,815, Wartburg, Christiania
PHOSPHATE—988 tons, $9,880, Wartburg, Riga
ROSIN—6,000 bbls, $24,531, Axminster, Riga
4,269 bbls, $19,086, Wartburg, Christiania
TURPENTINE—1,422 cks, $40,977, Axminster, Riga

New Orleans Exports.

COTTONSEED, CAKE—8,271 bgs, Easby Abbey, Esbjerg
21,025 bgs, Cairndon, Bristol
1,746 bgs, Felbridge, Leith
1,193 bgs, Marselisborg, Aarhuus
2,066 bgs, Rathlin Head, Belfast
12,430 bgs, Easby Abbey, Norresundby
8,153 bgs, Easby Abbey, Aarhuus
MEAL—8,188 bgs, Felbridge, London
13,458 bgs, Felbridge, Leith
7,194 bgs, Wayfarer, Liverpool
OIL—8 bbls, Olympia, Porto Cortez
3 bbls, Rosina, Celba
10 bbls, Colombia, Belize
20 bbls, Beacon, Bocas del Toro
COTTONSEED—35 bbls, Louisiana, Havana
76 bbls, Nor, Tampico
LUB—40 cs, Nor, Tampico
ROSIN—139 bbls, Nor, Tampico
SOAP—191 pkgs, Jno Wilson, Bluefield
STEARINE—160 bgs, Nor, Tampico
TALLOW—451 bbls, Wayfarer, Liverpool
25 bbls, Mount Vernon, Port Limon
TRIPOLI—300 bgs, Wayfarer, Liverpool
TURPENTINE—105 bbls, Darien, Liverpool
1,500 bbls, Felbridge, London

Galveston Exports.

COTTONSEED, MEAL—13,276 bgs, $15,272
Llanthony Abbey, Rotterdam
6,015 bgs, $8,948, Hornby Castle, Antwerp
104,533 bgs reported in our issue Dec 2 ex S S Northam for Hamburg should hav been 93,167 bgs, $109,724
OIL, COTTONSEED—3,975 bbls, $70,954, Llanthony Abbey, Rotterdam
300 bbls, $5,250, Hermine, Trieste
95,000 gls, $33,250, Lacroma, Trieste
SOAP, STOCK—392 bbls, $4,704, Jeanara, Glasgow

San Francisco Exports.

ACID—4 pkgs, Nevadan, Honolulu
ALUM—285 lbs, Nevadan, Honolulu
AMMONIA—3 cyls, Umatilla, Br Columbia
2 pkgs, Nevadan, Honolulu
5 pkgs, Doric, Japan
1 pkge, San Jose, Mexico
1 pkge, San Jose, Guatemala
BORAX—253 lbs, Nevadan, Honolulu
CALCIUM, CARBIDE—2 drs, Nevadan, Honolulu
CANDLES—27 bxs, Nevadan, Honolulu
150 bxs, Nevadan, Kahului
COPPER, SULPHATE—30,000 lbs, San Jose Mexico
FERTILIZER—880 tons, Nevadan, Kahului
430 tons, Edw May, Makaweli
GINSENG—3,472 lbs, Doric, Hong Kong
GLUCOSE—1,953 lbs, Nevadan, Honolulu
GLUE—100 lbs, Omega, Mexico
GREASE—360 lbs, Aloha, Honolulu
6 cs, Nevadan, Honolulu
5 pkgs, San Jose, Mexico
GUM—2 cs, Nevadan, Honolulu
2 cs, Doric, Shanghai
1 cs, Nevadan, Kahului
LAMP BLACK—12 bbls, Nevadan, Kahului
OIL, CAKE—2,020 lbs, Edw May, Makaweli
PAINT—2 pkgs, Umatilla, Br Columbia
28 pkgs, San Jose, Mexico
5 pkgs, Edw May, Makaweli
2 pkgs, Doric, Japan
77 pkgs, Nevadan, Honolulu
21 pkgs, San Jose, Guatemala
PLUMBAGO—240 lbs, Omega, Mexico
QUICKSILVER—50 flasks, Doric, Japan
RED LEAD—10 kegs, Nevadan, Kahului
ROSIN—4,945 lbs, Nevadan, Honolulu
SAGO—820 lbs, Nevadan, Honolulu
250 lbs, Aloha, Honolulu
247 lbs, 2 cs, San Jose, Guatemala
SOAP—192 bxs, Nevadan, Honolulu
11 bxs, Edw May, Makaweli
2 bxs, Doric, Hong Kong
4 bxs, Doric, Shanghai
794 bxs, Aloha, Honolulu
102 bxs, Nevadan, Kahului
12 bxs, San Jose, Colombia
1,000 bxs, San Jose, Panama
SODA—12,407 lbs, Nevadan, Honolulu
4,827 lbs, Aloha, Honolulu
7,750 lbs, Nevadan, Kahului
STARCH—612 lbs, San Jose, Mexico
160 lbs, Doric, Hong Kong
520 lbs, Doric, Shanghai
1,126 lbs, Aloha, Honolulu
35,624 lbs, Nevadan, Honolulu
872 lbs, Nevadan, Kahului
TALLOW—1,000 lbs, Omega, Mexico
5,825 lbs, San Jose, Guatemala
TAN BARK—2 bgs, Nevadan, Honolulu
TAR—4 pkgs, Umatilla, Br Columbia
40 bbls, Nevadan, Honolulu
TURPENTINE—50 cs, Nevadan, Honolulu
10 cs, Nevadan, Kahului
15 cs, San Jose, Guatemala
1 tank, San Jose, Nicaragua
VARNISH—4 cs, Nevadan, Honolulu
3 cs, Nevadan, Kahului
1 cs, San Jose, Guatemala
WHITE LEAD—10 pkgs, San Jose, Mexico
20 kegs, Nevadan, Kahului
55 kegs, San Jose, Guatemala
WHITING—40 pkgs, Umatilla, Br Columbia

To New York.

QUICKSILVER—20 flasks, San Jose

CHARTERS.

Following is a list of vessels chartered at principal ports during the past week to convey products to and from American ports:—

FERTILIZER—Sch Sallie C Marvel, from Balto to Savannah, p t
Sch Jennie Thomas, from Balto to Savannah, p t
KAINIT—Ger str Martha Russ, from Hamburg to Charleston and Wilmington, 8s
Ger str Claudius, from Hamburg to N Y and Fernandina, p t
Ger str Neptun, from Hamburg to Norfolk, p t
Ger str Elsa, from Hamburg to Wilmington, p t
Ger str Burgermeister Hackmann, from Hamburg to Fernandinia and Savannah, p t
PHOSPHATE—Nor str Sark, from Tampa to La Pallice and Honfleur, 14s 3d
Sch David P Davis, from Charlotte Harbor to Balto, $1.85
Sch Crescent, from Phila, to Wilmington, $1.05
ROSIN—Nor bk ——, from Savannah to Cork, f o, or Baltic, 2s 3d

NEW YORK DOMESTIC RECEIPTS.

Week ending Dec. 31.

ALCOHOL—47 bbls, order, New Orleans
150 bbls, J A Webb & Son, H R R R
WOOD—100 bbls, Hoople & A, L V R R
BARK EXT—51 bbls, order, O D S S L
BARYTES—721 bbls, order, O D S S L
BEESWAX—1 pkge, order, O D S S L
CLAY—1,302 bags, Owl Comm'l Co, Jacksonville
1,626 bags, order, Jacksonville
140 cks, R McNamee & Co, Charleston
325 bags, Tidewater Oil Co, Jacksonville
DEER TONGUE—35 pgs, Parke, Davis & Co, Brunswick
GREASE—75 tcs, Poole & M, H R R R
70 bbls, W J Gibson & Co, P R R
75 tcs, Welch H & C Co, D, L & W R R
100 bbls, 100 tcs, export, P R R
100 bbls, E Valk & Co, H R R R
300 bbls, Pgh Hide & T Co, P R R
75 bbls, H W Calef, L V R R
221 tcs, export, L V R R
200 tcs, W D Vandenhove & Co, P R R
62 bbls, Amer H & L Co, P R R
150 tcs, E Valk & Co, N Y, O & W R R
76 bbls, Northrup Com Co, P R R
16 bbls, order, F R L
GUM THUS—100 bbls, order, Wilmington
HIGHWINES—480 bbls,. Amer Dist Co, D, L & W R R
80 bbls, Cook & B Co, D, L & W R R
240 bbls, E J Markey, D, L & W R R
160 bbls, J Marcus, D, L & W R R
473 bbls, Geo Clark, D, L & W R R
160 bbls, H H Reimers & Co, B & O R R
20 bbls, order, New Orleans
80 bbls, E Conklin, New Orleans
43 bbls, F O Boyd & Co, New Orleans
15 bbls, Engel H & Co, New Orleans
160 bbls, J A Webb & Son, H R R R
240 bbls, Nat Dist Co, D, L & W R R
80 bbls, H Kroeger & Co, P R R
80 bbls, Engel H & Co, D, L & W R R
80 bbls, Globe Dist Co, D, L & W R R
LEAD—13,500 pigs, order, O D S S L
3,362 pigs, Amer S & R Co, Galveston
MUSTARD SEED—380 bgs, order, Galveston
333 bgs, J Kissock & Co, Galveston
OIL, CAKE—3,589 bgs, export, P R R
5,874 bgs, export, L V R R
18,495 bgs, export, D, L & W R R
820 bgs, McLaren & M, H R R R
325 bgs, McLaren & M, E R R
300 bgs, export, E R R
COTTONSEED—37 tank cars, W J Wilcox Co, W S R R
1,187 bbls, export, P R R
20 bbls, M M Mason, P R R
615 bbls, export, B & O R R
1,621 bbls, order, Savannah
655 bbls, order, O D S S L
250 bbls, Hopkins, D & Co, Jacksonville
210 bbls, export, O D S S L
213 bbls, Williams F Co, Charleston
FUSEL—13 bbls, order, New Orleans
LINSEED—60 bbls, T R Bagot, W S R R
LUB—189 bbls, export, W S R R
240 bbls, export, P R R
240 bbls, Lunham & M, P R R
20 bbls, Swan & F Co, P R R
MEAL—5,946 bgs, export, L V R R
1,350 bgs, export, W S R R
333 bgs, export, D, L & W R R
OLEO—885 tcs, export, W S R R
1,865 tcs, export, L V R R
75 tcs, M Frankfort, P R R
195 tcs, order, C R R of N J
150 tcs, export, P R R
130 tcs, Schwarzschild & S Co, P R R
175 tcs, export, D, L & W R R
335 tcs, export, B & O R R
ROSIN—478 bbls, order, Savannah
POTASH—18 cks, order, H R R R
24 cks, order, L V R R
5 cks, order, P R R
2 cks, order, W S R R
ROSIN—6,500 bbls, S P Shotter Co, Jacksonville
132 bbls, Tolar, H & Co, Jacksonville
516 bbls, S P Shotter Co, Charleston
792 bbls, order, O D S S L
500 bbls, Paterson D Co, New Orleans
1,745 bbls, order, Savannah
300 bbls, M W Larendon, Jacksonville
150 bbls, C B Turton & Co, Jacksonville
500 bbls, Paterson D Co, Jacksonville
780 bbls, order, Jacksonville
60 bbls, Tolar, H & Co, Brunswick
31 bbls, Baily & M, Brunswick
577 bbls, Paterson D Co, Mobile
64 bbls, Baily & M, Mobile
474 bbls, Tolar, H & Co, Georgetown
33 bbls, Baily & M, Georgetown
101 bbls, Melchers & B, Georgetown
25 bbls, F W Blossom, Wilmington
600 bbls, Paterson D Co, Brunswick
SOAP, STOCK—100 bbls, Aspegren & Co, Jacksonville
100 bbls, order, Jacksonville
SPELTER—3,145 slabs, order, O D S S L
SPONGE—31 bls, order, Savannah
54 bls, Lasker & Bernstein, Jacksonville
42 bls, A Moses' Son & Co, Key West
16 bls, order, Key West
STEARINE—120 tcs, export, W S R R
TALC—473 bags, order, O D S S L
TALLOW—11 bbls, order, P R R
203 bbls, order, F R L
302 bbls, E Valk & Co, P R R
80 bbls, W D Vandenhove & Co, P R R
75 bbls, H W Calef, E R R
35 bbls, W Flaccus & Co, B & O R R
449 bbls, E Valk & Co, N Y, O & W R R
104 bbls, order, C R R of N J
200 tcs, export, O D S S L
69 tcs, H W Calef,. D, L & W R R
TAR—209 bbls, order, O D S S L
8 bbls, order, Mobile
331 bbls, order, Wilmington
TURPENTINE—70 bbls, order, Jacksonville
1,200 bbls, Paterson D Co, Jacksonville
65 bbls, order, O D S S L
620 bbls, order, Savannah
150 bbls, S P Shotter Co, Jacksonville
5 bbls, Wieler Bros, Brunswick
80 bbls, order, Brunswick
106 bbls, Tolar H & Co, Georgetown
7 bbls, Baily & M, Georgetown
4 bbls, Melchers & B, Georgetown
134 bbls, Paterson D Co, Wilmington
16 bbls, Tolar H & Co, Wilmington
30 bbls, M W Larendon, Wilmington
22 bbls, Baily & M, Wilmington
8 bbls, F W Blossom, Wilmington
75 bbls, order, Wilmington
CRUDE—5 bbls, Welch H & C Co, Wilmington
VANILLA BEANS—50 bgs, export, Galveston

Total Domestic Receipts.

At New York for week ending Dec. 31, 1903.

	For week.	Since Jan. 1.
Alcohol, bbls	197	8,933
Beeswax, pkgs	1	554
Boneblack	....	14,643
Borax	....	1,940
Cottonseed, bgs	....	4,731
Ashes, bgs	....	612
Hulls	....	1,100
Cake, bgs	....	2,090
Meal, bgs	....	44,794
Flaxseed, bush	....	2,644,710
Glucose	....	960
Glue	....	250
Grease	1,620	40,488
Highwines, bbls	2,391	102,421
Lead, pkgs	16,862	464,767
Mustard, seed	713	11,619
Oil, cake, bgs	29,403	805,879
Cottonseed, bbls	10,691	454,699
Fish, bbls	....	2,048
Lard, bbls	....	2,712
Lubricating, bbls	689	38,315
Oleo, stock, tcs	3,810	182,634
Pitch, bbls	....	3,580
Quicksilver, flks	....	9,195
Rosin, bbls	13,880	453,083
Soap, stock, bbls	200	8,545
Spelter, pigs	3,145	131,226
Sponges, bls	163	8,136
Stearine, pkgs	120	10,745
Sumac, bgs	....	8,216
Tallow, pkgs	1,528	77,995
Tar, bbls	548	32,839
Turpentine, crude, bbls	5	893
Spirits, bbls	2,592	130,268

J. L. & D. S. RIKER,

46 Cedar Street, ... NEW YORK.

Importers' and Manufacturers' Agents.

SOLE AGENTS FOR THE UNITED STATES AND CANADA OF

The United Alkali Co., Limited, of Great Britain,

FOR THE SALE OF THEIR VARIOUS BRANDS OF

BLEACHING POWDER

Boston Domestic Receipts.

Week ending Dec. 30.

COTTONSEED MEAL—38 tons
GREASE—1,501 bbls
TALLOW—204 bbls

Baltimore Domestic Receipts.

Week ending Dec. 30.

COTTONSEED—3,853 bags, Savannah
OIL, COTTONSEED—75 bbls, Savannah
ROSIN—145 bbls, Savannah
PITCH—170 bbls, Savannah
ROSIN—3,634 bbls, Savannah
TURPENTINE—10 bbls, Savannah

Savannah Domestic Receipts.

Week ending Dec. 30.

ROSIN—20,248 bbls
TURPENTINE—2,995 bbls

Wilmington Domestic Receipts.

Two weeks ending Dec. 30.

ROSIN—1,252 bbls
TAR—3,740 bbls
TURPETINE—268 cks
CRUDE—1,150 bbls

New Orleans Domestic Receipts.

Week ending Dec. 29.

COTTONSEED—9,474 bags
OIL—31 bbls
PETROLEUM, CRUDE—1,102,500 gls, Port Arthur
PHOSPHATE—500 tons, Tampa

Naval Stores Export Statistics.

The following table gives the accounts of the several products shipped to each country during the month of November and during the period of eleven months ended November 30, 1903, with comparisons, rosins being given in barrels and spirits of turpentine in gallons. The report of exports of rosins also includes tar and pitch:—

Exports of Rosin During November.

Exported to—	1902.	1903.
United Kingdom	95,735	71,107
Belgium	27,191	1,933
Germany	42,841	56,763
Italy	2,337	9,053
Netherlands	32,829	2,058
Russia	.....	.....
Other Europe	4,078	3,375
British North America	5,658	9,527
Cent. Am. & Br. Honduras	274	304
Mexico	370	179
Cuba	1,459	1,671
Other W. Indies & Bermuda	459	560
Argentina	5,875	.....
Brazil	6,861	8,915
Chile	350	278
Colombia	461	558
Venezuela	349	168
Other South America	1,908	924
Chinese Empire	.....	20
Japan	225	470
British Australasia	2,154	1,693
Other Asia and Oceanica	50	13,583
British Africa	45	15
Other Africa	104	.....
Totals, rosin, tar, etc.	231,543	184,860
Included in above are:—		
Tar	1,522	762
Pitch	1,090	951

EXPORTS FOR ELEVEN MONTHS.

Exported to—	1901.	1902.	1903.
United Kingdom	771,129	686,097	720,163
Belgium	114,702	121,117	89,087
Germany	656,020	600,399	660,018
Italy	71,052	77,300	93,967
Netherlands	255,133	309,865	190,021
Russia	.....	.....	171,382
Other Europe	304,164	274,347	76,183
Br. N. America	51,163	71,300	73,379
Cent. Am. States & Br. Honduras	3,463	3,904	3,702
Mexico	3,593	6,128	4,620
Cuba	10,754	12,184	15,016
Other West Indies and Bermuda	4,942	6,700	6,158
Argentina	59,036	52,487	72,448
Brazil	90,394	100,690	80,574
Chile	3,943	4,851	11,526
Colombia	5,250	4,574	4,778
Venezuela	9,103	7,166	7,761
Other S. America	38,564	22,357	28,570
Chinese Empire	2,145	3,677	1,515
Japan	16,655	6,724	9,936
Br. Australasia	44,957	53,985	45,220
Other Asia and Oceanica	29,108	30,712	22,248
British Africa	1,454	918	684
Other Africa	207	272	51
Ttl. rosin, tar, etc.	2,546,941	2,466,754	2,389,037
Included in above are:—			
Tar	28,573	19,812	17,770
Pitch	13,944	16,195	15,190

Exports of Rosin and Turpentine During November.

Exported to—	1902.	1903.
United Kingdom	1,295,769	1,377,003
Belgium	83,720	.....
Germany	110,153	179,010
Italy	17,800	32,500
Netherlands	266,106	133,695
Other Europe	.....	.....
British North America	71,328	33,105
Cent. Am. & Br. Honduras	1,930	1,811
Mexico	335	573
Cuba	15,374	5,434
Other W. Indies & Bermuda	2,019	2,467
Argentina	13,200	20,640
Brazil	9,274	2,460
Chile	3,050	13,600
Colombia	362	1,345
Venezuela	570	1,035
Other South American	3,146	1,470
Chinese Empire	.....	300
Japan	.....	.....
British Australasia	3,900	31,590
Philippine Islands	100	2,500
Other Asia and Oceanica	20,060	120
British Africa	10,862	10,180
Other Africa	2,125	630
Other countries	.....	.....
Totals	1,931,183	1,851,068

EXPORTS FOR ELEVEN MONTHS.

Exported to—	1901.	1902.	1903.
United Kingdom	9,868,396	7,054,590	6,102,054
Belgium	2,237,141	2,683,386	1,528,250
Germany	2,431,562	2,654,554	2,004,681
Italy	455,319	341,336	312,910
Netherlands	1,733,136	2,231,677	1,697,880
Other Europe	12,687	17,292	20,866
Br. N. America	671,615	796,754	747,493
Cent. Am. & Br. Honduras	12,722	15,818	15,824
Mexico	6,026	5,304	12,265
Cuba	107,152	69,801	88,965
Other West Indies and Bermuda	24,010	22,650	25,362
Argentina	199,105	206,430	230,302
Brazil	111,660	140,480	121,027
Chile	61,278	55,638	143,801
Colombia	9,869	9,737	14,554
Venezuela	10,443	5,931	10,071
Other S. America	79,522	41,783	70,794
Chinese Empire	23,602	11,010	10,152
Japan	37,276	8,275	26,500
Br. Australasia	525,398	239,600	275,446
Philippine Islands	8,250	12,410	7,950
Other Asia and Oceanica	23,370	57,852	38,430
British Africa	79,755	133,108	138,238
Other Africa	3,000	10,245	16,000
Other countries	104	.....	.....
Totals	18,732,458	16,825,981	13,659,763

TOTAL IMPORTS AT NEW YORK.

In the following table we give the total imports (in packages unless otherwise specified), and their values at the port of New York, for the week ending Dec. 31, 1903:—

	Quantity	Value.
Glass, plate	95	$8,843
Window	1,119	1,763
L. G. Plates	184	19,045
Acid, benzoic	127	4,228
Carbolic	228	5,402
Citric	2	25
Oxalic	60	2,782
Salicylic	40	1,017
All other	20	1,098
Aniline colors	2,746	129,205
Ammonia carb	20	434
Muriate	144	3,657
Sal.	52	2,337
Sulph.	755	3,516
Argols	1,022	24,541
Albumen	43	2,858
Alizarine	239	16,631
Asst	30	922
Asphalt	....	7,162
Balsam, unspecified	48	3,462
Bark, unspecified	195	376
Barytes, carb	600	1,158
Sulph.	574	1,115
Bay leaves	67	361
Bleach powder	1,406	7,990
Brimstone	....	16,774
Bronze powder	....	3,803
Butter, cocoa	641	27,497
Chalk	....	966
Chem. salts	360	6,086
Chicory	25	161
Cinchonidia	70	16,778
Cochineal	20	2,031
Coca leaves	39	448
Cobalt	18	9,025
Cutch	200	993
Dextrine	200	467
Dyewood ext.	155	3,019
Flowers, arnica	20	180
All other	269	2,051
Fuller's earth	775	600
Gambier	8,115	79,076
Gelatine	74	3,839
Glucose	6	153
Glycerine	623	60,422
Gum chicle	188	4,087
Copal	1,053	12,804
Camphor	440	27,102
Damar	38	604
Guiac	1	19
Kowrie	1	73
Sandrac	4	120
Shellac	235	19,870
Scammony	2	239
Tragacanth	39	2,660
All other	4	151
Glue	582	11,703
Indigo	24	2,284
Carmine	10	710
Iodine	212	57,319
Isinglass	4	427
Juniper berries	200	382
Laurel leaves	200	618
Locust beans	55	39
Manganese	10	496
Ore	27	367
Tons	100	2,614
Man. salt	....	34,557
Mica	30	533
Nut galls	100	1,400
Nux vomica	910	2,288
Orchilla liquor	39	1,986
Oil, amber	1	10
Aniline	22	2,375
Almonds	35	585
Anise	1	16
Bergamot	78	3,557
Camphor	75	580
Castor	7	112
Caraway	7	502
Cajeput	126	1,903
Cassia	40	2,256
Citronella	14	485
Cod	419	9,694
Cocoanut	548	31,821
Creosote	50	155
Fusel	61	3,857
Geranium	41	2,348
Haarlem	50	625
Lavender	23	3,426
Olive	3,128	24,507
Myrbane	10	572
Neroli	24	6,525
Origanum	1	184
Orange	118	3,902
Lemon	153	2,806
Palm	26	1,845
Poppy	2	82
Rapeseed	610	11,403
Rose	4	1,868
Rosemary	2	114
Sesame	41	467
Sandalwood	3	158
Tanner's	2	56
Other ess.	69	8,295
All other	115	1,311
Opium	32	8,344
Prep. of	2	1,428
Orange peel	105	132
Paints, unspecified	....	18,206
Berlin blue	15	687
Blanc fixe	124	1,162
Chrome yellow	41	1,370
Green	1	130
Drop black	27	640
Lithophone	161	2,745
Red lead	1	15
Umber	1	32
Venetian red	303	742
Vermilion	20	1,926
White lead	15	241
Pitch	70	714
Potash, carb	157	5,461
Caustic	61	1,374
Cyanide	200	8,441
Sulph	1,750	6,918
Potato starch	100	649
Plumbago	706	7,854
Quicksilver	....	10
Quinine	148	10,680
Reg. antimony	175	2,586
Root, gentian	8	71
Licorice	5,224	20,979
Orris	200	1,145
Rhubarb	44	877
Sarsaparilla	28	501
All other	295	6,637
Saffron, ext	7	159
Sage leaves	106	535
Senna	134	2,715
Soda ash	131	2,487
Carb	141	309
Caustic	15	146
Nitrate	69,175	194,948
Prussiate	13	843
Sulphate	3	44
Sponges	473	17,877
Stearine	213	3,488
Sulphur ore	....	20,478
Sumac	205	1,569
Ext.	60	1,354
Talc	900	1,799
Turmeric	27	138
Ultramarine	12	474
Varnish	28	1,514
Venice turpte	25	137
Wool grease	440	4,044
Other	....	78,450
Bristles	192	31,119
Alcohol	35	512
Dutch metal	27	2,188
Metal, leaf	6	1,368
Cassia	1,073	11,124
Cinnamon	5	82
Chillies	206	840
Cloves	700	12,977
Clove stems	545	2,961
Ginger	85	506
Mace	50	2,013
Mustard	31	337
Nutmegs	757	11,354
Pepper	3,659	53,823
Pimento	185	1,771
Corkwood	....	20,512
Dyewood	....	21,735
Logwood, m. lbs	420	3,540
Candles	....	44
Clay	....	3,327
Carbon	....	2,208
Corks	....	10,289
Polishing powder	....	114
Seed, caraway	144	908
Cardamom	10	216
Celery	50	840
Cloves	1,235	30,398
Cummin	10	88
Fennel	76	523
Lycopodium	5	600
Millet	500	882
Mustard	1,374	7,114
Poppy	2	12
Rape	204	982
Other	....	44,057
Soap, Castile	255	928
All other	117	8,296
Stock	876	19,385
Stone, pumice	....	1,545
Tapioca	129,665	717,419
Flour	537	1,297
Wax	....	19,223

FOREIGN MAILS.

The following gives the date and time of closing the mails for foreign countries at the New York Postoffice. The star indicates that letters may be addressed per steamer named for the countries indicated. The section indicates that registered mails close at 6.30 p. m. on the previous day. In case of mails via steamers from Pacific ports the hour of closing is up to the date specified.

After the closing of the supplementary transatlantic mails named below additional supplementary mails are opened on the piers of the American, English, French and German steamers, and will remain open until ten minutes of the hour of sailing.

Regular and supplementary mails close at foreign station half an hour later than closing time shown below (except that supplementary mails for Europe and Central America, via Colon, close one hour later at foreign station).

Mails for—	Steamer.	Date.	Mails close at P. O. Regular.	Suppl.
Europe, via Plymouth, Cherbourg and Bremen	K'prinz Wilhelm	Jan. 5..	3.30 a. m..	—
Italy direct	Prinz Oscar	Jan. 5..	7.30 a. m..	—
Italy direct	Hohenzollern	Jan. 5..	8.30 a. m..	—
Brazil, via Pernambuco, Bahia, etc	Byron	Jan. 5..	5.30 a. m..	—
Central America (except Costa Rica) and South Pacific ports*	Allianca	Jan. 5..	9.30 a. m..	10.30 a. m.
Haiti	Prins Wm. III	Jan. 5..	10 a. m..	—
Europe, via Queenstown	Majestic	Jan. 6..	6.30 a. m..	—
Cuba and Mexico	Monterey	Jan. 7..	8 a. m..	—
Bermuda*	Trinidad	Jan. 7..	8 a. m..	—
Mexico, via Tampico	Opland	Jan. 7..	12 m..	—
France, Switzerland, Italy, Spain, Portugal, Turkey, Egypt, Greece, British India and Lorenzo Marquez*	La Champagne	Jan. 7..	7 a. m..	—
Bahamas	Orizaba	Jan. 8..	12 m..	12.30 p. m.
Europe, via Plymouth and Cherbourg	St. Louis	Jan. 9..	6 a. m..	—
Belgium direct	Vaderland	Jan. 9..	8.30 a. m..	—
Inagua, Haiti and Santa Marta	Athos	Jan. 9..	9.30 a. m..	10.30 a. m.
Leeward and Windward Islands, British, Dutch and French Guiana	Caribbee	Jan. 9..	9.30 a. m..	10.30 a. m.
Cuba, via Havana	Morro Castle	Jan. 9..	10 a. m..	—
Fortune Islands, Jamaica, Savanilla, Cartagena and Greytown	Altai	Jan. 9..	9.30 a. m..	10.30 a. m.
Porto Rico, Curacao and Venezuela	Caracas	Jan. 9..	8.30 a. m..	9.30 a. m.
Cuba, via Havana	Olinda	Jan. 9..	12.30 p. m..	—
China and Japan, via Tacoma	Tacoma	To Jan. 7..	6.30 p. m..	—
China and Japan, via Seattle	Shinano Maru.	To Jan. 6..	6.30 p. m..	—
§Philippine Islands, via San Francisco	U. S. Transport.	To Jan. 27..	6.30 p. m..	—
§Hawaii, China, Japan and Philippines, via San Francisco*	America Maru.	To Jan. 20..	6.30 p. m..	—
§Hawaii, via San Francisco	Alameda	To Jan. 4..	6.30 p. m..	—
§Australia (except West), New Caledonia and Fiji Islands, via Vancouver and Victoria, B. C.	Moana	To Jan. 9..	6.30 p. m..	—
§Australia (except West), New Zealand, Hawaii, Fiji and Samoan Islands and New Caledonia, via San Francisco	Sonoma	To Jan. 16..	6.30 p. m..	—
§Tahiti and Marquesas Islands, via San Francisco	Mariposa	To Feb. 6..	6.30 p. m..	—
Hawaii, China, Japan and Philippines, via San Francisco	Coptic	To Jan. 10..	6.30 p. m..	—
§China and Japan, via Vancouver and Victoria, B. C.	Emp. of Japan.	To Jan. 19..	6.30 p. m..	—

MAILS FORWARDED OVERLAND, ETC., EXCEPT TRANS-PACIFIC.

CUBA—Via Fort Tampa, Fla., closes daily, except Thursday, at §5.30 a. m. (the connecting mails close here on Mondays, Wednesdays and Saturdays).

MEXICO CITY—Overland, unless specially addressed for dispatch by steamer, closes daily, except Sunday, at 1.30 p. m. and 11.30 p. m., Sundays at 1.00 p. m. and 11.30 p. m.

NEWFOUNDLAND—By rail to North Sydney, and thence by steamer, closes daily at 6.30 p. m. (connecting mails close here every Monday, Wednesday and Saturday).

JAMAICA—By rail to Boston, and thence by steamer, closes at 6.30 p. m. every Friday; by rail to Philadelphia, and thence by steamer, closes at 11.30 p. m. every Sunday.

MIQUELON—By rail to Boston, and thence by steamer, closes daily at 6.30 p. m.

BELIZE, PUERTO CORTEZ and GUATEMALA—By rail to New Orleans, and thence by steamer closes daily, except Sunday, at §1.30 p. m. and §11.30 p. m., Sundays at §1.00 p. m. and §11.30 p. m. (connecting mail closes here Mondays at §11.30 p. m.).

COSTA RICA—By rail to New Orleans, and thence by steamer, closes daily, except Sunday, at §1.30 p. m. and §11.30 p. m., Sundays at §1.00 p. m. and §11.30 p. m. (connecting mail closes here Tuesdays at §11.30 p. m.).

BAHAMAS (except Parcels-Post Mails)—By rail to Miami, Fla., and thence by steamer, closes at §11.30 p. m. every Tuesday and Saturday.

§REGISTERED MAIL closes at 6.00 p. m. previous day.

NOTE.—Unless otherwise addressed, West Australia is forwarded via Europe; and New Zealand and Philippines, via San Francisco—the quickest routes. Philippines specially addressed "via Canada" and "via Europe" must be fully prepaid at the foreign rates. Hawaii is forwarded via San Francisco exclusively.

Trans-Pacific mails are forwarded to port of sailing daily and the schedule of closing is arranged on the presumption of their uninterrupted overland transit.

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HAVING WORKS IN ALL SECTIONS OF THE COUNTRY WE CAN GIVE BUYERS BENEFIT OF CONSIDERABLE SAVING IN FREIGHTS

CHEMICAL MARKET.

NOTE.—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on pages 31 and 32.

Saturday Evening, Jan. 2, 1904.

Considering the intervening holidays, trade during the week has been unusually good. Deliveries, especially of all the heavy chemicals, have been in excess of the previous week, as many of the large consumers wished to close up their yearly contracts before entering the new year. Arsenic is a shade easier for spot, with less pressure to sell forward. Blue vitriol is firmer under reports of an early advance after the new year opens. Brimstone is firmer for shipment. Owing to the war scare, ocean freights have been advanced abroad, and this may be reflected later on in an advance among all articles from those ports. Cream of tartar and tartaric acid are both firmer in anticipation of an early advance. Alum and the other light chemicals and acids are all meeting with the usual demand incident to this period of the year, with few changes to note, as detailed below. Late mail advices from England say:—

Liverpool, Dec. 23, 1903.

Sulphate of copper is again stronger and nearest values are now £21 5s. to £21 10s. for January delivery and £21 15s. for Spring delivery. Fertilizers are a good market, but ordinary lines of heavy chemicals are without special feature and the usual holiday feeling prevails. Soda, ash—Steady at the usual range, as to market. For tierces nearest range for any position may be called about as follows:—Leblanc ash, 48 per cent., £5 to £5 10s. per ton; 58 per cent., £5 10s. to £6 per ton; ammonia, ash, 48 per cent., £4 5s. to £4 10s.; 58 per cent., £4 10s. to £4 15s., net cash. Bags 5s. per ton under price for tierces. Soda crystals—Firm at generally £3 7s. 6d. per ton, less 5 per cent. for barrels, or 7s. less for bags, with special terms for a few favored markets. Caustic soda—Quiet, but prices are steadily maintained as follows:—60 per cent., £8 15s.; 70 per cent., £9 15s.; 74 per cent., £10 5s.; 76 per cent., £10 10s. per ton, net cash. Special quotations for export to the Continent and a few other favored quarters. Bleaching powder is quite idle as regards prompt business, and hardwood is nominally quoted at about £3 15s. to £4 per ton, net cash, as to market. In spite of the higher range of values coming into force next month, cheap parcels offering on spot fail to attract attention from buyers. Chlorate of potash is dull at nominally 2½d. per lb., net cash, for English make. Bicarb. soda in fair request at £6 15s. per ton, less 2½ per cent., for the finest quality in one cwt. kegs, with usual allowances for larger packages; also special terms for a few favored markets. Sulphate of ammonia is strong, and good gray, 24 to 25 per cent., is held on spot for £12 12s. 6d. to £12 15s. per ton, less 2½ per cent. for double bags f. o. b. here, and a premium quoted for Spring delivery. Nitrate of soda has also improved and spot quotations have been raised to £10 to £10 5s. per ton, less 2½ per cent., for double bags f. o. b. here, as to quantity and quality, and prices are still tending upward.

Heavy Chemicals.

ALKALI.—Deliveries during the week have been unusually large, not only to the glassmakers but other large consumers who have been taking up their 1903 contracts. There has been a better demand for forward and sales have been made of several round lots at .72½c. for light in bulk and .77½c. in bags and 77½c. in bulk for dense and .80c. for bags f. o. b. works. The local demand, however, has been rather slow, but nothing unusual at this period of the year. Jobbing sales are reported at .85c. up to .97½c., as to test, packing and quantity.

BICARB SODA.—The market is firmer in all positions, with more inquiry both for export and for home consumption for delivery over the early spring months. Prices are steady at 1.30c. in bulk and 1.50c. for kegs f. o. b. works, and in this section at 1.50c. for bulk and 1.70c. for kegs, less the usual discount terms.

CAUSTIC SODA.—For the first time in many months there have been sales by second hands, who had more stocks on hand than their current wants required. Rather than incur extra storage expense sales were made at a slight concession from regular prices. There is more demand for forward, and additional sales of high test have been made of several round lots at 1.75@1.80c. f. o. b. works, as to test and quantity. Powdered is in good request, with prices held steady at 2¾c. up to 3¼c., as to test, quantity and point of delivery.

SALT CAKE.—Deliveries upon existing contracts are going forward promptly, with now and then additional sales of glassmakers' grades reported at .82½c., delivered in the various consuming centers in and out of the gas belt. Nothing new in niter cake, which is dull and prices are nominally at $4.25 up to $9 per ton, as to quantity and delivery point.

SAL SODA.—The usual jobbing demand prevails in addition to regular contract deliveries at 60c. f. o. b. works, and 70c. delivered in this section, less the usual discount terms. Concentrated is quiet but steady at 1.40c. and up for "Arm and Hammer," as to quantity and terms of sale. Foreign is quoted at .67½c. for January arrival.

MONOHYDRATE CRYSTALS.—The bulk of the business passing at the moment is confined to regular deliveries upon existing contracts. Prices remain steady at 1⅜c. and for "Snowflake" at 1¼c. and up f. o. b. works, as to quantity and terms of sale.

BLEACHING POWDER.—The market is gradually working to a firmer position, as outside lots disappear from the market. Jobbing sales are reported at 1.25c. and up, as to quantity and make. Nothing new in 1904 contracts, which remain steady at 1¼c. for English and domestic seaboard delivery and German at 1.20c. and upward, as to quantity, test and terms of sale.

Acids.

ACETIC.—The deliveries the past month have been unusually good, and, taking the year as a whole, they are in excess of 1903. Prices remain steady at 1.80c. and upward, as to test, quantity, packing and terms of sale.

AQUA AMMONIA.—Rather more inquiry for delivery after the turn of the year, and prices are steady at 5c. and upward, as to quantity and terms of sale for 26 deg., in drums.

NITRIC.—Further business is reported for 1904 delivery, and prices are firmer in all positions at 4¾c. and upward, as to strength and quantity.

MURIATIC. — Deliveries the past month were exceptionally large, and show an increase over the previous month. The bulk of the 1904 contracts have been booked, and prices are steady at 1½c. and up, as to strength, quantity and terms of sale.

OXALIC.—Only a small jobbing demand for spot goods is reported at 5⅛c. up to 5¾c., as to make and seller. For 1904 contracts trade has been slow, with prices steady at 5c. for English or German and 5½c. for Norwegian.

TARTARIC.—Only a small jobbing demand for spot goods, as makers are not pressing sales at the moment. There are reports current that prices may be advanced early in the year. Meanwhile we quote crystals at 31¼@31½c., and powdered at 31½@31¾c., as to quantity and terms of sale.

SULPHURIC.—The year just closed, with all its drawbacks, has been one of unusual activity, as is shown by the large increase in deliveries over those of the previous year. Already the bulk of the contracts for 1904 have been booked, and they show an increase over 1903. Prices remain firm for 66 deg. at 1.30c. and upward, as to quantity and terms of sale.

Miscellaneous Chemicals.

ACETATE OF LIME.—Trade has been rather quiet, but nothing unusual for the closing week of the year. Prices remain steady at .85@.90c. for brown and 1.40@1.45c. for gray, as to quantity and delivery point.

ALUM.—Contract deliveries the past week have been fair for the holiday season. There is more demand for forward. Prices are steady at 1.75@1.80c. for lump and 1.80@1.85c. for ground and 3c. and upward for powdered, as to quantity and terms of sale.

ARSENIC.—The market is quiet for spot goods at 3¼c. and upward, as to make and quantity. There has been rather more demand for English, with sales of 100 tons reported for January and February shipment at 3.15c. French is quoted for January arrival at 3.05c. and German at 3⅛c. Red is dull but steady at 6⅝@6¾c., as to grade and quantity.

BLUE VITRIOL.—Sales were made early in the week of several round lots at 4.70c. for car lots at seaboard delivery. Later, however, prices stiffened up, as it was intimated that an advance of .10c. would be made early in the new year.

BRIMSTONE.—Spot market remains quiet at $22.50. Shipments are firmer under reports of ocean freights to be advanced on account of the war scare. January-February shipments are quoted at $22@22.50 and thirds about 50c. per ton less.

CHLORATE OF POTASH.—Second hands are selling in a jobbing way at 7@7⅛c. for crystals and powdered at

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SOLE AGENTS IN THE UNITED STATES FOR
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Mined and Manufactured by
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This Arsenic analyzes 99.80 % Arsenious Oxide, and is the purest and whitest made.
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Sole Selling Agents for the United States and Canada.

Established 1865.
FERGUSSON BROTHERS, Philadelphia, Pa.
BLUE VITRIOL

THE GRASSELLI CHEMICAL CO.

ESTABLISHED 1839.
GENERAL OFFICES AND PRINCIPAL WORKS
CLEVELAND, O.

MANUFACTURERS OF

Mixed Acid, Nitric Acid, Muriatic Acid, Sulphuric Acid, C. P. Glycerine, Lithopone, Blue Vitriol, Sal Soda, Aqua Ammonia, Sal Ammoniac, Glauber's Salt, Sulphate of Zinc, Bi-Chloride of Tin, Tin Crystals, Acetate of Lead White and Brown, Hyposulphite of Soda.

SILICATE OF SODA, ACETIC ACID, ACETATE OF SODA, ETC., ETC.

Salt Cake for Glass Makers. Chloride of Zinc Solution, Fused and Granulated. Strictly Chemically Pure Acids and Aqua Ammonia.

Branch Offices and Works:—St. Louis, Mo.; St. Paul, Minn.; Olean, N. Y.; Cincinnati, O.; Titusville, Pa.; East Chicago, Ind.; Beaver Falls, Pa.; Boughton, Pa.; Milwaukee, Wis.; Birmingham, Ala.; New Orleans, La.; Fortville, Ind., etc., etc.

New York Works, Tremley, N. J. **New York Office, 63-65 Wall Street**

7½c. and up, as to quantity. Shipments January forward are quoted at 6½@6¾c., as to quantity, buyer and terms of sale.

CHLORATE OF SODA.—Trade has been rather quiet, as buyers, at the moment, are not anticipating their future wants. Small sales on the spot are reported at 7c., and for January forward at 6¾c. and upward, as to quantity and terms of sale.

CAUSTIC POTASH.—No change in the situation, which remains a steady one, with limited offerings at 6⅛@6¼c., and pearl and potashes, which are in limited stock, at 6½@7c., as to quantity and seller.

CARBONATE OF POTASH.—Not sufficient demand for either prompt or forward to test the market. Prices may be quoted nominal at 4@4½c. for hydrated, and 3½@4c. for calcined, as to test, quantity and date of delivery.

CREAM OF TARTAR.—The market is firmer in all positions under reports of an early advance. Second hands are selling in a retail way at 24½c. for either crystals or powdered, as to quantity and terms of sale.

GLAUBER'S SALT.—There have been additional sales to regular deliveries for January forward at 80c. for car lots and 85c. and up for jobbing parcels.

COPPERAS.—Deliveries have been fair to meet current demands; outside of these trade has been slow, with prices steady for car lots at 52½c. in barrels.

SAL AMMONIAC.—Only a small jobbing demand for spot stocks of white grain at 5⅞@6c., and lump at 9¼c. up to 9¾c., as to grade. Further business is reported for 1904 contracts at 6@6⅛c. for white and 5¾@6c. for gray grain, and lump at 9⅛c. up to 9½c., as to grade and quantity.

SUGAR OF LEAD.—Trade has been rather slow, but nothing unusual. Deliveries have been fair and prices are steady at 6¾@7c. for brown and 8⅝@8⅞c. for white crystals., and 10c. for powdered, as to terms of sale.

SALTPETER.—Only a small jobbing demand for spot goods at 3.60c., and for arrival at 3.45c. and up for crude, and 4¼@5¼c. for refined, as to grade and quantity.

Parties desiring to be brought in contact with concerns who offer bargains in machinery are respectively referred to page 27 of this issue.

If you desire to be brought in contact with the makers of machinery which enters into the manufacture of chemicals, drugs, paints, dyestuffs, fertilizers, naval stores, varnish, white lead, cotton oil, linseed oil, lubricating oil, etc., we would respectfully refer you to the Machinery Department of this publication, which you will find on page 23. Any special information that may be desired will be gladly furnished upon application, for we are in a position to place prospective purchasers in direct communication with the manufacturers of machinery of all kinds.

Russian and American Petroleum in Germany.

Export, a German trade paper, in its issue of September 24, 1903, says:—

The taxation of Russian petroleum according to measure instead of weight and the general increase of the test point have been advocated. The fact that Russian oil is heavier than American oil causes the former to pay a higher duty per gallon than the latter under a weight tariff. The duty on raw and refined petroleum in Germany is $1.43 per 220 pounds; while on lubricating oil it is $2.38 per 220 pounds, including the weight of the wrapper. In the former commercial treaty with Russia the duty on refined petroleum has been levied according to both measure and weight. It is stipulated in the protocol to this treaty that petroleum for lighting purposes shall be taxed, not according to weight, but according to volume, and that 125 liters (33 gallons) at 15 deg. Cel. shall equal 100 kilograms (220 pounds). This decision has found favor in the new tariff, so that it will not come under the influence of the commercial treaty but will be employed independently. The specific gravity of oil on which there is a duty of $2.38 according to weight must be 0.8. American petroleum meets this requirement, while the specific gravity of Russian petroleum is 0.82. Two hundred and twenty pounds of American oil amount to 33 gallons, while the same amount of Russian oil will measure 32.25 gallons. The duty on 3 gallons is about 4½c. The taxation according to volume is very important as far as Russia is concerned. During the period 1897-1902, the amount of petroleum imported (into Germany) from Russia rose from 9,037,482 gallons, valued at $357,000, to 41,763,565 gallons, valued at $1,886,400; while imports of American oil fell from 255,161,072 gallons to 229,825,125 gallons. In the last year imports of Russian petroleum reached the value of $4,545,800, of which sum $2,558,500 was for lubricating oil; American petroleum was imported to the value of $15,898,400, of which amount $5,367,800 was for lubricating oil. A reduction of the tariff on Russian petroleum was opposed in 1893 by the German Government on financial grounds. We do not know whether they take the same view now or not. The figures given above show that the import of Russian petroleum can be assisted by other means than by a reduction of the tariff. At any rate the decreased tariff would only aid the imports of petroleum for lighting purposes, but lubricating oil and crude petroleum, which is imported in considerable amounts for purposes of refining, would not be affected thereby. When the new tariff is discussed in the Reichstag, the question will be considered as to what the effect will be of different duties for raw and refined oil on the creation of a great German refining industry. The beginnings of such an industry are already at hand, as the comparatively successful development of a few refineries in the last few years have shown. Their further extension is hindered by the fact that raw petroleum pays the same duty as the refined product.

BUTYRIC ACID 60%, 80%, 100%

BUTYRIC ETHER, AMYL BUTYRATE

Prices and Samples on Application.

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SOLID IN DRUMS — FLUID IN TANK CARS
PRACTICALLY CHEMICALLY PURE — COMPOSITION GUARANTEED
HIGHEST POSSIBLE PERCENTAGE OF CALCIUM CHLORIDE
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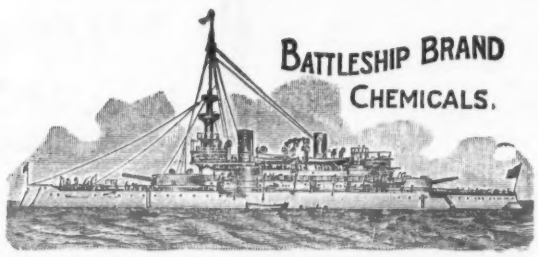
Caustic Soda



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Pure Alkali.

Manufactured by the Ammonia Process.

This Alkali contains 58 per cent. of Alkali or nearly 99 per cent. of Carbonate of Soda. It is the most economical form of soda for manufacturers of Soap, Glass, Paper, Wood Pulp and Colors, and for Printers and Bleachers.

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BRUNNER, MOND & CO., Limited,

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Syracuse, New York.

THE SOLVAY PROCESS CO. will make by this same process an Alkali adapted for Window Glass Makers, testing 48 per cent.

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FERTILIZER MATERIALS.

NOTE.—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on page 32.

Saturday Evening, Jan. 2, 1904.

Ammoniates.

SULPHATE AMMONIA. — The market has been decidedly firmer in response to an unexpected active demand, due, in part, to the loss of a steamer which had on board 4,500 tons of nitrate of soda. Prices have been advanced to $3.17½@3.20 for gas, and to $3.07½@3.10 for bone. Transactions amounted to a good volume, and included 500 tons of sulphate gas at $3.17½@3.20, cost, insurance, freight New York. Cables from primary markets noted a firm tendency to prices and sellers' views firm for parcels for prompt shipment, holders naming $3.17½@3.20 for January and February shipment.

FISH SCRAP.—The tendency to prices continued to be firm in response to a general good inquiry from various quarters. Several transactions were made within the quoted range of prices. Holders named $2.45 and 10c. for dried f. o. b. fish works, and wet acidulated was held at $2.20 and 35c. f. o. b. fish works. A lot of 300 tons of dried, analyzing 13.09 per cent. of ammonia, was sold at $30 per ton f. o. b. Vancouver, B. C. Offerings of scrap have been moderate, owing to the small available supply, and no anxiety on the part of holders to market their goods. Ground scrap was offered at $31.50 and upward, but sales, in the aggregate, were moderate.

AZOTINE.—In the continued absence of offerings, and few buyers, no transactions worthy of mention could be traced. Prices were quoted at $2.60@2.65 per unit.

TANKAGE.—Inquiries continued to be good, and in the absence of free offerings prices showed strength. Several large contracts have been made covering the output of six months by one certain factory, and the price paid was $2.55 and 10c., cost and freight, Richmond, Va. Other sales, including lots of 250 to 300 tons, have been made at full quoted prices. Holders named $2.15 and 10c. for 9 and 20 per cent.; $2.17½ and 10c. for 8 and 20 per cent., all f. o. b. Chicago.

GARBAGE TANKAGE.—The movement of supplies on outstanding orders was fair, and prices were firmly maintained at $8@9, at which figure some transactions have been made, but particulars were withheld.

DRIED BLOOD.—Prices have been firm but without quotable change. Lots 12 and 13 per cent. were held at $2.45@2.50 f. o. b. New York. The demand has been fairly active, and business of a fair volume resulted. Transactions included one lot of 300 to 400 tons, and several parcels of 200 tons each at prices ranging from $2.45@2.47½ f. o. b. Chicago.

NITRATE OF SODA.—As a result of the loss of a steamer with 4,500 tons or nitrate of soda on board, the tendency to prices grew firmer and holders advanced quotations for spot parcels 10c. to $2.20@2.25. Futures advanced and January delivery was held at $2.20; February, $2.17½@2.20, and July to December, at $2.02½. Cables from Valparaiso note that the market there has been firmer and advancing, and closing cable advices reported that business was suspended, it being a holiday there. No large sales have been made, and the usual orders for spot parcels were booked at $2.20@2.25. Offerings included lots of about 200 tons for immediate delivery, ex store at Savannah, at $2.25; parcels due to arrive at Savannah in February at $2.25; to arrive at Charleston in March at $2.25, and due at Wilmington, N. C., in February at $2.25.

Phosphates.

ACID.—The demand from the South was fair and several small lots changed hands at full prices.

BONES.—In the absence of free offerings, owing to the light available supply, transactions in a large way have been restricted. Prices remained very firm, with the tendency upward, and holders named $17 and upward for rough, $20@24 for ground steamed, and raw ground at $23 and upward, according to terms of sale. Refuse was held at $16 and upward.

PHOSPHATE ROCK.—No news of interest has been received from primary markets and no transactions of importance have been recorded. Prices remained steady.

Potashes.

MURIATE.—No price changes were effected and the market continued to be steady in tone. Trading in large lots was slow and the deliveries on outstanding contracts were fairly good. Prices rested on a steady basis and spot parcels were quoted at $1.88@1.91½ for 80 per cent. and $1.83@1.86½ for future delivery.

SULPHATE.—Fair inquiries were received from the South, but no large sales were effected. Only small parcels were traded in at $2.11@2.14, basis 90 per cent., according to terms of sale.

SYLVINIT.—No large sales worthy of mention were made and business transacted was confined to deliveries on contracts. Prices were quoted steady at 39@40c., according to terms of sale.

KAINIT.—The demand from the South continued to be fair and resulted in sales at full prices, including several lots of 350 tons for shipment to the South at $9.55. Parcels for shipment to the North were held at $9.05.

KIESERIT.—In the absence of business trade continued to be quiet and prices remained quotably unchanged at $7@7.25.

Parties desiring to be brought in contact with concerns who offer bargains in machinery are respectively referred to page 27 of this issue.

GOODS ON THE WAY TO THE UNITED STATES.

W. C. S. AMERICA.
TO THE UNITED STATES.

Duguay de Trouin, 3,500 tons nitrate soda.
Queen Elizabeth, 2,800 tons nitrate soda.
Margherita, 1,600 tons nitrate soda.
King Alfred, 1,900 tons nitrate soda.
Wynford, 3,200 tons nitrate soda.
Glenclova, 3,700 tons nitrate soda.
Roma (ss), 5,000 tons nitrate soda.
Almora, 2,800 tons nitrate soda.
Menantic (ss), 4,300 tons nitrate soda.
Walden Abbey, 2,700 tons nitrate soda.
Sokoto, 3,500 tons nitrate soda.
Coya (ss), 3,500 tons nitrate soda.
Tymeric (ss), 5,000 tons nitrate soda.
Quito (ss), 4,500 tons nitrate soda
Mashona, 3,700 tons nitrate soda.
Adelaide, 4,800 tons nitrate soda.
Golden Gate, 1,200 tons nitrate soda.
George Fleming (ss), 5,000 tons nitrate soda.
Verbena, 3,000 tons nitrate soda.
Elleric (ss), 5,000 tons nitrate soda
Andora, 2,400 tons nitrate soda.
Cumbal (ss), 6,000 tons nitrate soda
Fernfield (ss), 4,500 tons nitrate soda
Garnet Hill, 3,000 tons nitrate soda
Condor (ss), 3,500 tons nitrate soda.
Capac (ss), 1,000 tons nitrate soda.
Irisbrook (ss), 4,500 tons nitrate soda
Alala (ss), 5,000 tons nitrate soda

RECORD OF VESSELS.

Sailed.

Port and Name. W. C. S. America.	
Anglo-African (ss)	Due December.
King Alfred	Due December.
Margherita	Due January.
Duguay de Trouin	Due January.
Wynford	Due January.
Glenclova	Due January.
Roma (ss)	Due January.
Almora	Due January.
Walden Abbey	Due January.
Sokoto	Due January.
Quito (ss)	Due January.
Queen Elizabeth	Due January.
Coya (ss)	Due January.
Mashona	Due January.
Golden Gate	Due January.
George Fleming (ss)	Due January.
Menantic (ss)	Due February.
Verbena	Due February
Elleric (ss)	Due February
Andora	Due February.
Capac (ss)	Due February.
Irisbrook (ss)	Due February.
Tymeric (ss)	Due March.
Cumbal (ss)	Due March.
Fernfield (ss)	Due March.
Garnet Hill	Due March.
Alala (ss)	Due March.
Adelaide	Due April.
Condor (ss)	Due April.

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THE STANDARD AMMONIATE
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(FOR PHILADELPHIA AND VICINITY)
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Acid Hydrofluoric.	Chrome Alum.	Potash First Sorts.
Ammonia Fluoride.	Copper Carbonate.	" Fluoride.
Antimony Metal, Powd.	" Oxide.	" Sulphuret.
" Needle.	Feld Spar.	Powder Blue.
" Oxide.	Fluor Spar.	Pumice Stone,
Aqua Ammonia.	Formaldehyde.	Rotten Stone,
Arsenic, Red.	Glass, Ground.	Sal Ammoniac, Gray and White.
" White.	Iron Oxide.	Sugar of Lead, Brown
Barium Carbonate, Prec.	Lycopodium.	Soda Fluoride.
Blue Vitriol.	Manganese, all Kinds.	Tin Chloride.
Bone Ash.	Muriate of Ammonia.	" Oxide.
Boracic Acid, Refined White, and Tuscany Flaky.	Nickel Anodes.	Zaffre.
	" Salts.	Zinc Carbonate.
Borax.	Potash Carbonate, Hydrated and Calcined.	" Oxide.
Caustic Soda, all Tests,	Potash Cyanide.	" Sulphate, etc., etc.

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Muriatic Acid,	*Chloride of Alumina,*	*Hypo-Sulphite of Soda,*
Nitric Acid,	*Hydrate of Alumina,*	*Tin Crystals, Etc.*
Acetic Acid,	*Acetate of Alumina,*	*Aqua Ammonia,*
Acetate of Soda,	*Glauber's Salt,*	*Wood Alcohol,*
Alum,	*Sulphate of Soda,*	*Colors.*

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Fertilizer Materials and Chemicals for Manufacturing Purposes of all descriptions. Specialties: Muriate of Potash, Double Manure Salt, Sulphate of Potash, Kainit, Sylvinit, and other products of the Stassfurt Mines.
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DYE MARKET.

NOTE.—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on page 32.

Saturday Evening, Jan. 2, 1904.

The cotton situation continues to cause considerable uncertainty as to the operation of the factories and a general disposition is manifested only to buy from hand-to-mouth. Many of the cotton goods manufacturers regard the situation as still too unsettled to warrant making any plans for their supply of cotton and the decline this week has strengthened the waiting position. Many have looked for lower prices for cotton on the strength that a larger crop existed than the reports have indicated. Some of the operators have attempted to sound the market on a scale of prices for their product based upon the present high cost of cotton and the prospects are said to be far from promising. Movements of dyestuffs are mostly of a jobbing and for immediate consumption nature. Some fairly large transactions are reported along staple lines. Egg and blood albumen continue firm. Cochineal is still in upward tendency on the reduction of stocks. Gambier is more active and steadier. The postponement of the Calcutta sales has left the situation in indigo dull. Blue aleppo nutgalls are in very scant supply. Domestic sumac is practically out of the market, and the imported grades are held in more regard.

ALBUMEN.—The market retains all the strength previously noted, especially on blood. Supplies are still light and we hear nothing for the domestic blood below 13½c., while the range extends to 18c. for the imported. For the egg, Chinese may be had from 43@50c. and the European varieties command 55@60c.

ANILINE OIL.—No change in demand, supply or values is noted, and the article is fairly steady at 9@9½c. for goods from store.

ANILINE SALT.—Holders are not burdened with supplies and consumers are believed to have just enough to tide over the present dull season. Active conditions will probably show a considerable lightness of stocks. Prices continue at 8¼@8½c., as to quantity, for store goods.

BICHLORIDE OF TIN.—Some interest has been centered upon this item because of the advance in tin, but the quiet tone of the general market tends to keep quotations as last reported, namely, 9@9¼ for the 50 deg. and 12¼@12¾ for the 60 deg.

COCHINEAL.—Cable advices from the Canary Islands indicate a maintained strength on the basis of diminished supplies and here the market is very firm on the gray black, nothing being offered below 54c., while the range extends to 60c., as to quality. Black is held at 45@50c., while silver is variously quoted from 48@52c.

CUTCH.—There is a regular demand in moderate lots for this article, and the market is without feature at the following prices:—Mat, 4@5c.; boxes, 4½@7c.; refined, in boxes, 6@7c.; slabs, 6@8c.

DIVI DIVI.—Lack of interest keeps the market very quiet and prices are somewhat nominal. The range extends from $35@40 per ton for store goods, as to quantity, condition and holder.

GAMBIER.—A more active and steadier tone is evidenced, and some fairly large transactions have been consummated for both spot and goods to arrive. Dock stock may be had at 5c., and goods from store at 5¼@5¾c., as to quantity, condition and seller. One large operator announces a transaction involving 25,000 tons for a large New England textile factory at market values. Little of the gambier now at dock is expected to be offered from store, as the bulk of it will be taken up in ready consumption.

HYPOSULPHITE OF SODA.—The same steady outlet holds the market to unchanged conditions and prices may be repeated as:—American, bbls., 1.60@1.65c.; kegs, 1.70@1.95c.; German, casks, 1.70@2c.; kegs, 1.90@2.30c.

INDIGO.—Lack of interest and the insufficiency of arrivals still tend to delay the Calcutta public sales, and the market here continues dull. The prices paid for the goods which have been in demand at Calcutta show a decline of 5@10 rupees from last year's average. Still further reductions are looked for, because of the competition between two aniline dye companies. The synthetic situation is quiet, but unchanged.

NUTGALLS.—Blue Aleppo galls are difficult to be had, and prices continue on a scale that buyers hesitate to pay. The principal holders are well cleaned up, and little relief from the scarcity is in sight. There are now more sellers at 14½c. Chinese galls are backward at 13½@14c.

PRUSSIATE.—The market on the yellow prussiate of potash and prussiate of soda retains its firm tone, in the face of the quiet week, because of the scarcity of supplies. The former is held at 15c., and the latter at 10½@10¾c., as to quantity.

STARCH.—Corn starch is in better regard, because of the higher tendency of corn, and common starch is held at 1.70c. in bags and 1.80c. in barrels. The other items under this head are without interest and are quoted as follows:—Potato starch, 4@5c.; rice starch, 6½@7c.; wheat starch, 4¼@4½c.

SUMAC.—Virginia sumac continues scarce and the market is practically barren of supplies. More attention is centered upon the Sicilian varieties, and we are informed that Virginia grinders are putting forth inquiries in this market for the Sicilian leaves. The domestic grade is held nominally at $40@45 per ton. There is still one holder of No. 1 Sicily who offers at $45 per ton in a very large way, and $47.50 and $50 are more generally quoted.

TIN CRYSTALS.—Rumors of firmer values have been afloat because of the advance in the raw material, but there is as yet no occasion to change our previous quotations of 20c. for barrels, 20½c. for kegs and 21½c. for jars.

TURMERIC.—Under the limited consumption there is very little interest manifested in any of the varieties. There are still no offers of any Chinese, but the other grades may be quoted as follows:—Bengal, 3¾@4c.; Aleppe, 5@5½c., Coringa, 4@4¼c.

ZINC DUST.—The firm conditions recently noted in our reports still prevail and more active movements are expected to establish the market more strongly on the basis of 5c., which, we hear, can now be shaded.

Parties desiring to be brought in contact with concerns who offer bargains in machinery are respectively referred to page 27 of this issue.

(Special Correspondence to the Reporter.)

Reorganization of Board of General Appraisers.

Washington, Dec. 31, 1903.

The reorganization of the Board of General Appraisers, projected several weeks ago by Secretary Shaw and Assistant Secretary Armstrong, has been finally arranged and will become effective with the opening of business on January 2, under a code of regulations the joint work of the Board and the Treasury Department. Important reforms are expected to result, and developments will be watched with special interest by importers in all lines.

In providing new rules for the government of the Board, articles 1711 to 1734 of the customs regulations of 1899 have been used as a basis. The principal changes embrace the division of the Board into three sub-boards of three members each, such sub-boards having co-ordinate jurisdiction over both classification and reappraisement cases; a new method of procedure in the handling of protests, with a view to materially expediting the public business and preventing the enormous accumulations of cases on the suspended files as heretofore; and special requirements with regard to the retention of samples in cases placed on the suspended files.

The first change made in the regulations governing the Board is in article 1715 (article 1716 in the new code), in which the authority of the president of the Board of General Appraisers to designate an acting president during his temporary absence is transferred to the Secretary of the Treasury. Articles 1718 to 1726 have been entirely recast and prescribe the methods adopted for expediting the hearing of protests, the treatment of the suspended files, the furnishing of notices to importers and their attorneys, the subdivision of the general board, etc. The text of these new regulations is as follows:—

"Art. 1,718. Regular hearings of protests on classification shall be held at the port of New York, and at such other ports as the Secretary of the Treasury may from time to time designate. A calendar shall be prepared monthly of all cases arising and not submitted since the previous calendar. Such calendar shall be called by the president of the board or some member of the board designated by him, at least once each month, and all cases thereon not suspended, submitted or defaulted, shall be set for hearing on a day certain before one of the boards designated by the Secretary of the Treasury. On the day so set for hearing, the board to which the cases have been assigned shall proceed to dispose of the same without unnecessary delay.

"Art. 1,719. At ports where there is a Board of General Appraisers in session, importers and their attorneys shall be given seven days' notice by mail of the day set for the calendar call provided for in Art. 1,717, and at other ports such notice shall be mailed to the importers or attorneys at least fourteen days before the day set. If on such call day the importer or his attorney shall fail to appear his case shall be ordered submitted on default. If appearance be made,

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his case shall be set for hearing on a day certain, and as early as practicable.

"Art. 1,720. Any board of three may place any case on the suspended calendar, whenever it is satisfied that there is pending before the courts on review a case presenting the same issue. Such order of suspension shall designate by number or otherwise the case and the court in which it is pending. The board will in no instance place upon the suspended file any protest involving any question of fact unless accompanied by adequate samples, where samples are practicable, or by an agreed description of the goods which are the subject of the protest. If the board is satisfied that a case pending in court is not being diligently prosecuted, it shall take similar cases from its suspended files and proceed to hear and determine the same.

"Art. 1,721. Motions for the suspension of protests must be in writing, and shall set forth in detail the facts relied upon. Objections thereto, either on the part of the Treasury Department or of the importer, may also be filed. Applications for the revocation of orders of suspension of protests will be heard at any time, and if deemed sufficient, the protests will be decided, or set for hearing after due notice to the protestants.

"Art. 1,722. Suspended cases shall be kept on a separate calendar, and called quarterly during the first week of January, April, July and October, and shall be then assigned for trial, unless in the opinion of the board a further suspension is justifiable; but no case shall be set for hearing without two weeks' notice to the importer or his attorney.

"Counsel for the Treasury Department shall make quarterly reports of all suspended cases and the reason therefor, and if suspended because of the pendency of similar questions before the courts, he shall report what, if any, progress has been made in the prosecution thereof since his last report, together with such recommendations as he may desire to submit, and shall send a duplicate of this report to the General Board of General Appraisers. The Secretary of the Treasury may order any case taken from the suspended files and proceeded with whenever in his opinion the interests of the Government will be conserved thereby.

"All suspended protests shall be promptly decided upon the determination of the suits involving the questions at issue, or whenever the protests involve frivolous claims, or are found to be manifestly defective in any respect. Whenever it appears that the interests of justice require it, the board may, on application of either party, set a case for special hearing without placing the same on the calendar.

"Art. 1,723. For the expeditious disposition of appeals for reappraisement by the General Board, and of protests on classification cases, the General Appraisers shall be organized into three boards of three members each. Said boards shall have equal jurisdiction, and one of said boards shall always be on duty at the port of New York during business hours. A General Appraiser may be designated by the Secretary of the Treasury for duty on more than one board during the absence of any regular member. So far as practicable, but having regard for the familiarity of the boards with special subjects, cases arising under Sections 13 and 14 of the act of June 10, 1900, shall be assigned equally by the president of the General Board, or member acting in his stead, to the respective boards, in order that a steady disposition thereof may be made. Said boards shall be numbered 1, 2, 3, respectively. The Secretary of the Treasury, when the public interests appear to require it, will designate a board to visit principal ports, to hear and decide cases pending at such ports and at ports contiguous thereto.

"Art. 1,724. No board sitting in reappraisement shall act upon an appeal from a decision of an individual member thereon.

"Art. 1,725. The president shall assign appeals for reappraisement to individual General Appraisers, distributing the same among them as equally as circumstances will permit.

"Art. 1,726. The General Board shall adopt such rules as may be necessary to prevent the promulgation of conflicting decisions."

The provisions of article 1731 authorizing the General Appraisers to visit the several ports of entry have been modified and the corresponding paragraph of the new regulations, article 1732, reads as follows:—

"Art. 1,732. A single General Appraiser designated by the president of the General Board, to be approved by the Secretary of the Treasury, shall, when necessary, visit ports of entry other than New York to take evidence in classification cases, to conduct reappraisements, to investigate the methods of appraisements, and to receive from local appraisers full reports of their appraisements of articles of import."

In promulgating these new regulations the department officials express the hope that they will result not only in improving the general character of the work of the Board of General Appraisers, but especially in hastening the adjudication of important cases and in reducing the bulk of the suspended files. The plan of the department for carrying appeals from the Board directly to the United States Circuit Court of Appeals, instead of to the Circuit Court as at present, is an important auxiliary feature of the projected reforms and has already been incorporated in the bill introduced in the House by Chairman Payne of the Ways and Means Committee and recently described at length in these dispatches. The department hopes the bill will soon become a law and that, taken in connection with the reorganization of the Board, it will result in the early settlement of a large amount of accumulated litigation and in the prompt disposal of the customs business hereafter.

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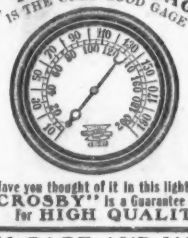

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